

59	SKP2**	Fp11**	Fp12**	Fp13**	Fp14**	Fp15**	Fp16**	Fp17**	Fp18**	Fp19**	Fp20**	Fp21**	Fp22**	Fp23**	Fp24**	Fp25
10	QAR QLD RHEAENHLSY	QD LEE SFY LUKW														
20	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE	SC LPE
30	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS	SC LAKS
40	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG
50	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG	SL KV SIG
60	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK	DE SWK

FIG. 1

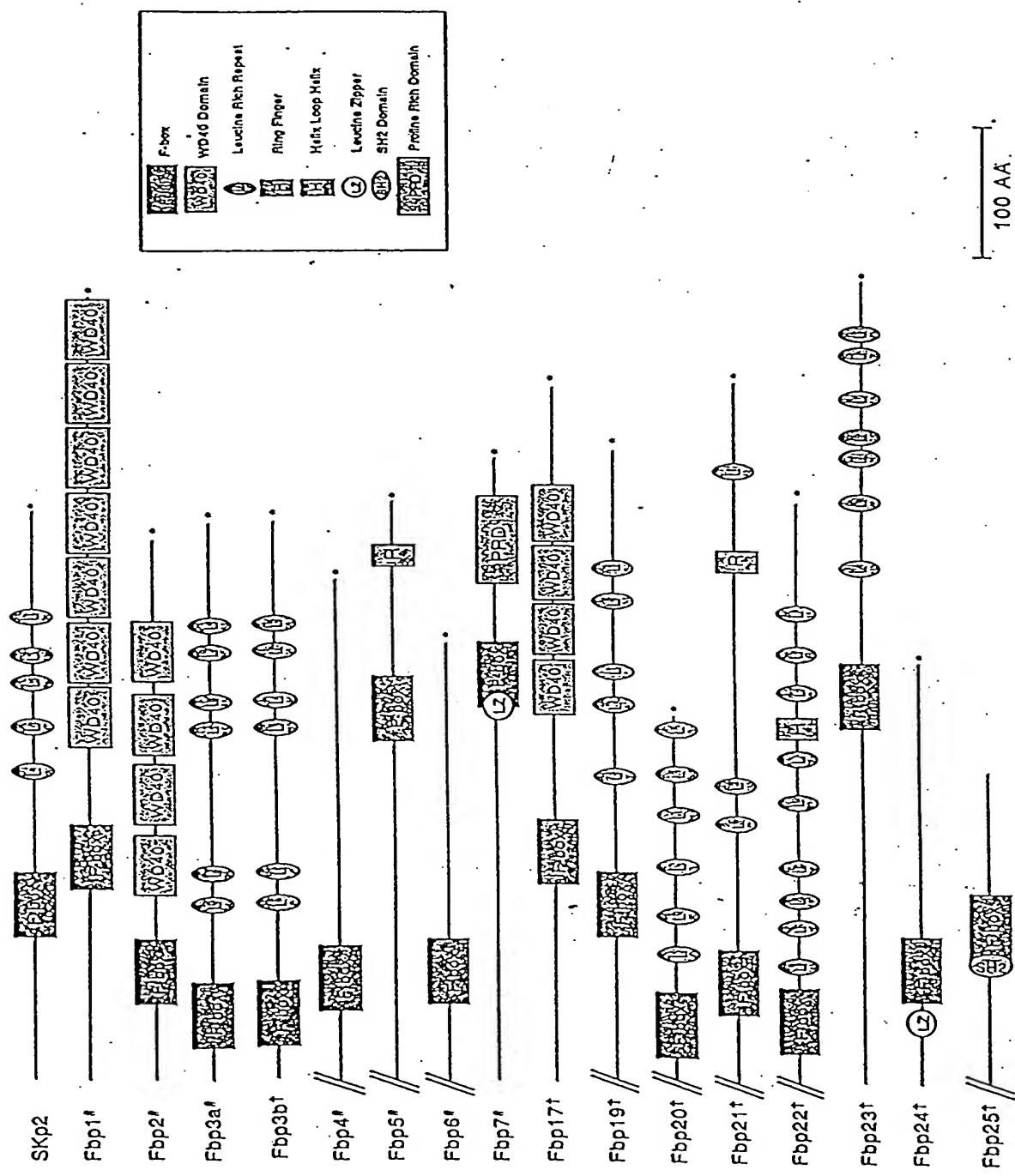


FIG. 2

10 20 30 40 50 60
 MDPAEAVLQEAKFMNSSEREDCNNGEPPRKIIPEKNSLROTYNSCARLCLNQETVCLA
 70 80 90 100 110 120
 STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESVDQVEFVEHL
 130 140 150 160 170 180
 ISQMCHYQHGHINSYLPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY
 190 200 210 220 230 240
 RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII
 250 260 270 280 290 300
 QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK
 310 320 330 340 350 360
 RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNLTIIHCEAVLHLRFNNGMM
 370 380 390 400 410 420
 VTC SKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC
 430 440 450 460 470 480
 EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN
 490 500 510 520 530 540
 KRI VSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVVSSHDDT
 550 560
 ILIWDFLNDPAAQAEPPRSPSRTYTYISR

FIG. 3A

10 20 30 40 50 60 70 80 90
 TGGCTGGCTGGGCTGGCACCAAGGGGGGGGGGGGGAGGGGGACCCAGTGGCTGGGCTGGGCTATTATGGACCCGGAGGGGGCTGC
 100 110 120 130 140 150 160 170 180
 AAGAGAAGGCACTCAAGTTATGAAATTCTCAGAGAGAGAGACTGTAATAATGCCAACCCCTAGGAGATAATAACAGAGAAGAACTCACT
 190 200 210 220 230 240 250 260 270 280
 TAGACAGACATACAACAGCTGTGCCAGACTCTGCTAAACCAAGAAACAGTATGTTTACCAAGCACTGCTATGAAGACTGAGAAATTGTGTGCC
 290 300 310 320 330 340 350 360 370
 AAAACAAAATGCCAATGCCAATGCCAATGCCAATGCCAACGAAACTCTCAGCAAGCTATGAAAAGAAAAGGAAAGGAACTGTGTGCC
 380 390 400 410 420 430 440 450 460 470
 AATACTTTGAGCACTGGTCAGTCAGATCAAGTGGAAATTGTGGAACATCTTATATCCAAATGTGTCAATTACCAACATGGCACATAAACTC
 480 490 500 510 520 530 540 550 560
 GTATCTAAACCTATGTCAGAGAGATTCATAACTGCTCTGCCAGCTCGGGGATTGGATCATATCGTGAGAACATTCTGTCAACCTGGAT
 570 580 590 600 610 620 630 640 650
 GCGAAATCACTATGTCGCTGCAACTTGTGCAAGGAATGGTACCGAGTGACCTCTGATGCCATGCTGTGGAAAGAGCTTATCGAGAGAAATGG
 660 670 680 690 700 710 720 730 740 750
 TCAGGACAGATTCTCTGTGGAGAGGGCTGGCAGAACAGGGATGGGACAGTATTATTCAAAACAACTCTGACGGGAATGCTCCOC
 760 770 780 790 800 810 820 830 840
 CAACTCTTTTATAGAGCACTTTATCCTAAATTATACAGACATTGAGACATAGARTCTAATTGGAGATGTGGAAAGACATAGTTACAGAGA
 850 860 870 880 890 900 910 920 930 940
 ATTCACTGCCGAAGTGAACAAAGCAAGGAGTTACTGTTACAGTATGATGATCAGAAAATAGTAAGCGGCCCTCGAGACAAACAAATCAAGA
 950 960 970 980 990 1000 1010 1020 1030
 TCTGGATAAAAACACATTGGAATGCAAGCGAATTCTCACAGGCCATACAGGTTACGTTCTGTCCTCAGTATGATGAGAGAGTGATCATAAC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 AGGATCATCGGATTCACCGTCAGACTGTGGATGTAATAACAGGTGAAATGCTAAACAGTTGATTCACCAATTGTGAACCAAGTTCTGCACCTG
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CGTTCAATAATGCCATGCGTACCTCTCCAAAGATCGTCCATTGCTATGGATATGCCCTCCCCAACTGACATTACCCCTCGGAGGG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 TCTGGTGGACACCGAGCTGCTGCAATGTTGAGACTTTGATGACAAGTACATTTGTTCTGCAATTGGGATAGAACTATAAGGTATGCCA
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 CACAAGTACTGTGAATTGTAAGGACCTTAAATGGACACAAACGAGGATTCCCTGTTCCAGTACAGGGACAGGCTGGTAGTGAGTCGCTCA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TCTGACAAACACTATCAGATTATGGACATAGAAATGCGTCATGTTACGAGTGTAGAAGGCCATGAGGAATTGGTGGTGTATTGATTTG
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 ATAACAAGAGGATAGTCAGTGGGCCATATGCAAAATTAAGTGTGGATCTGTGGCTTTGGACCCCGTGCTCCCTGCAAGGGACACT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 CTGCTACGGACCCCTGCGGACATCCGGAGAGTTTCTGACTACAGTTGATGAAATCCAGATTGTCAGTAGTTCACATGATGACAAATC
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 CTCATCTGGACTTCTAAATGATCCAGCTCCCAAGCTGAACCCCCCTCTGAAACATACACCTACATCTCGAGATAATAACCA
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
 TACACTGACCTCATACTTGCCAGGACCCATTAAAGTGGGTATTTACGTATCTGCCAATACAGGATGAGGAACAACAGTAACAATCAAC
 1890 1900 1910 1920 1930 1940 1950 1960 1970
 TACTGCCAGTTCCCTGCACTAGCCGAGGAGCAGGGTTGAGACTCTGTTGGACACAGTTGGTCTGCACTGGGCCAGGACGGTCACTC
 1980 1990 2000 2010 2020 2030 2040 2050 2060
 ACCACAACGTACTGCTTCAGTGTGCTATCAGAAGATGTCCTCTATCAATTGTGAATGATTGGAACCTTTAAACCTCCCTCTCCCT
 2070 2080 2090 2100 2110 2120 2130 2140 2150
 CACCTCTGCACCTAGTTTCCATTGGTCCAGACAAAGGTACTTATAAATATTTAGTGTGTTGGCAGAAAAAA

FIG. 3B

10	20	30	40	50	60
MERKDFETWLDNISVTFLSLTDLQNETLDHLISLSGAVQLRHLSSNNETLLKRDFLKLL					
70	80	90	100	110	120
PLELSFYLLKWLDPQTLLTCCLVSKQWNKVISACTEVWQTACKNLGWQIIDDSVQDALHWK					
130	140	150	160	170	180
KVYLKAILRMKQLEDHEAFETSSLIGHSARVYALYYKDGLLCTGSDDLSAKLWDVSTGQC					
190	200	210	220	230	240
VYGIQTHTCAAVKFDEQKLVTGSFDNTVACWEWSSGARTQHFRGHTGAVFSVDYNDLDI					
250	260	270	280	290	300
LVSGSADFTVKVWALSAGTCLNTLTGHTEWVTKVVLQKCKVKSLLHSPGDYILLSADKYE					
310	320	330	340	350	360
IKIWPIGREINCKCLKTLSVSEDRSICLQPRLHFDGKYIVCSSALGLYQWDFASYDILRV					
370	380	390	400	410	420
IKTPEIANLALLGFGDIFALLFDNRYLYIMDLRTESLISRWPPLPEYRESKRGSSFLAGEH					

PG

FIG. 4A

10 20 30 40 50 60 70 80 90
 ATGGAGAGAAAGGACTTTGAGACATGGCTTGATAAACATTCTGTTACATTCTCTGACGGACTTGAGAAGAAATGAAACTCTGGATCACC
 100 110 120 130 140 150 160 170 180
 TGATTTAGTCTGAGTGGGGCAGTCCAGCCTCAGGCATCTCTCCAATAACCTAGAGACTCTCTCAGGGGACTTCTCAAACTCCTCCCCCTGGA
 190 200 210 220 230 240 250 260 270 280
 GCTCAGTTTTATTCTTAAATGGCTCGATECTCAGACTTTACTCACATCCTGCTCTCTAAACAGTGGATAAGTGATAAGTGCTGT
 290 300 310 320 330 340 350 360 370
 ACAGAGGTGTGGCAGACTCCATGTAAGAAATTGGCTGGCAGATAGATGATTCTGTTCAAGGACCTTGCAGTGGAAAGGTTTTGAAGG
 380 390 400 410 420 430 440 450 460 470
 CTATTTGAGAAATGAAGCACTGGAGGACCATGAACCCCTTGAACACCTCGTATTAAATTGGACACAGTGCCAGAGTGATGCCACTTACTACAA
 480 490 500 510 520 530 540 550 560
 AGATGGACTTCTCTGACAGGGTCAGATGACTTGTCTGCAAGCTGTGGATGTGACCCACAGGGCAGTGGCTTATGGCATCCAGACCCACACT
 570 580 590 600 610 620 630 640 650
 TGTGCAGGGTGAAGTTGATGAAACACAAGCTTGTGACAGGGCTCTTGACAAACACTGTGGCTTGTGGAAATGGACTTCCGGAGCCAGGACCC
 660 670 680 690 700 710 720 730 740 750
 ACCACTTTGGGGGACACGGGGGGCTTATTTAGCGTGGACTACAAATGATGAACTGGATATCTGGTGACGGGCTGTGCAAGACTTCACTGTGAA
 760 770 780 790 800 810 820 830 840
 AGTATGGCTTTATCTGCTGGACATGCCGTGAAACACACTCACCGGGCACACGGAAATGGTCACCAACGGTACTTTGAGAAGTGCAGAAAGTCAG
 850 860 870 880 890 900 910 920 930 940
 TCTCTCTTGACAGTCTGGAGACTACATCCTCTTAAGTGCACACAAATATGAGATTAAGATTGGCAATGGAGAGAAATCAACTGTAAAGT
 950 960 970 980 990 1000 1010 1020 1030
 CCTTAAACACATTGTCTGCTGTAGGGATAGAACTATCTGCCGTGCAACCAAGACTTCATTTGATGCCAAATACATTGTCTGTAGTTAGCAG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TGGTCTCTACCACTGGACTTTGCCAGTTATGATATTCTCAGGGTCATCAAGACTCCTGAGATAGCAAACTTGGCTTGTGGCTTGGAGAT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 ATCTTTGCCCTGCTGTTGACAACCGCTACCTGTACATCATGGACTTGGGACAGAGAGGCTGATTAGTCGCTGGCTCTGCCAGAGTACAGGG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 AATCAAAACAGAGGGCTAACGCTTCTGGCAGGGAAACATCTGGCTGAATGGACTGGATGGCACAATGACACGGGCTTGGCTTGGCACCAGC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 ATGCCCTGACCACAGTATTCAACCTGGTGTGGAAAGGAGCACGGCTGACACCATGAGCCACCAACCGCTGACTGACTTGGGTCCCCGGCTGGC
 1420 1430 1440 1450 1460 1470
 CGTTTTGGGTGCACCTCTGGGGCACCGCAGCTGCATGAACCAAAGTCTCACCTAATGGTATCATCA

FIG. 4B

10 20 30 40 50 60
MKRGGRDSDRNSSEE GTA EKSKLRTTNEHSQTC DWGNLLQDII LQVFKYLP LLDR AHAS

70 80 90 100 110 120
QVCRNWNQVFHMPDLWRC FEFELNQPAT SYLKATHPE LIKQI IKRHSN H LQYVSFKV DSS

130 140 150 160 170 180
KESAE AACD ILSQLVNC SLKTLGLI STARPSFMDLPKSHFIS ALTVVFVN SKSLSSLKID

190 200 210 220 230 240
DTPVDDPSLKVLVANNSDTLKLLKMSSCPHVSPAGILCVADQCHGLRELALNYHLLSDEL

250 260 270 280 290 300
LLALSSEKHVRLEHLRIDVVSENPGQTHFTIQKSSWDAFIRHSPKVN LVMYFFLYEEEF

310 320 330 340 350 360
DPFFRYEIPATHLYFGRSVSKDVLGRVGMTCPRLVELVVCANGLRPLDEELIRIAERCKN

370 380 390 400 410 420
LSAIGLGECEVSCSAFVEFVKMCGGRLSQLSIMEEVLIPDQKYSLEQIHWEVSKHLGRVW

FPDMMPTW

FIG. 5A

FIG. 5B

10 20 30 40 50 60
MKRNSLSVENKIVQLSGAAKQPKVGFYSSLNQTHHTVLLDWGSLPHVVLQIFQYLPLL

70 80 90 100 110 120
DRACASSVCRRWNEVFHISDLWRKFELNQSATSSFKSTHPDLIQQIICKHFAHLQYVS

130 140 150 160 170 180
FKVDSSAESAEACDILSQLVNCISIQLGLISTAKPSFMNVSEHFVSAUTVVFINSKSL

190 200 210 220 230 240
SSIKIEDTPVDDPSLKILVANNSDTLRLPKMSSCPHSSDGILCVADRCQGLRELALNY

250 260 270 280 290 300
ILTDELFLALSSETHVNLEHLRIDVVSENPGQIKFHAVKKHSWDALIKHSPRVNVVMHFF

310 320 330 340 350 360
LYEEEFETFFKEETPVTHLYFGRSVSKVVLGRVGLNCPRLIELVVCANDLQPLDNEICI

370 380 390 400 410 420
AEHCTNLTALGLSKCEVSCSAFIRFVRLCERRLTQLSVMEEVLIPDEDYSLDEIHTEVSK

430
YLGRVWFPPDVMPLW

FIG. 6A

10 20 30 40 50 60
 ACATTTCTAATGTTACAGAATGAAGAGGAACAGTTATCTGTTGAGAATAAAATTGTCCAGTGTCA
 70 80 90 100 110 120 130
 GGAGCAGCGAACAGCCAAAAGTTGGGTTCTACTCTCTCTCAACCAGAACATACACACACGGTTCTT
 140 150 160 170 180 190 200
 CTAGACTGGGGAGTTGCCCTACCATGTTAGTACAAATTTCAGTATCTCCCTTACTAGATCGG
 210 220 230 240 250 260 270
 GCCTGTGCATCTCTGTATGTTAGGAGGTGGAATGAAGTTTCATATTCTGACCTTGGAGAAAGTT
 280 290 300 310 320 330 340
 GAATTTGAACAGTACAGCTACTTCATCTTAAGTCCACTCATCCTGATCTCATTAGCAGATC
 350 360 370 380 390 400 410
 ATTAAAAAGCATTGCTCATCTTCAGTATGTCAGCTTAAGGTTGACAGTAGCGCTGAGTCAGCAGAA
 420 430 440 450 460 470 480
 GCTGCCCTGTGATATACTCTCAGCTGGTAAATTGTTCCATCCAGACCTTGGGCTTGATTCAACAGCC
 490 500 510 520 530 540 550
 AAGCCAAGTTCATGAATGTCGGAGTCATTTGTGTCAGCACTACAGTTGTTTATCAACTCA
 560 570 580 590 600 610 620
 AAATCATTATCATCAATCAAAATTGAAGAGATACACCAGTGGATGATCCTTCATTGAAGATTCTGTGGCC
 630 640 650 660 670 680 690
 ATAATAGTGCACACTCTAAGACTCCAAAGATGAGTAGCTGTCCTCATGTTCATCTGATGGAATTCTT
 700 710 720 730 740 750
 TGTGTAGCTGACCGTTGTCAGGCCTTAGAGAACTGGCGTTGAATTATTACATCCTAACTGATGAACCT
 760 770 780 790 800 810 820
 TTCCCTGCACTCTCAAGCGAGACTCATGTTAACCTTGAACATCTCGAATTGATGTTGAGTGAAAT
 830 840 850 860 870 880 890
 CCTGGACAGATTAATTCATGCTTTAAAAACACAGTTGGGATGCACCTTATTAAACATTCCCTAGA
 900 910 920 930 940 950 960
 GTTAATGTTGTTATGCACTTCTTCTATATGAAGAGGAATTCGAGACGTTCTCAAAAGAACCCCT
 970 980 990 1000 1010 1020 1030
 GTTACTCACCTTATTGGTCGTTCAAGTCAGCAACTGGTTTAGGACGGGTAGGTCTCAACTGTCCT
 1040 1050 1060 1070 1080 1090 1100
 CGACTGATTGAGTTAGTGGTGTGCTAATGATCTCAGCCTCTTGATAATGAACCTTATTGTATTGCT
 1110 1120 1130 1140 1150 1160 1170
 GAACACTGTACAAACCTAACAGCCTGGGCTCAGCAAATGTGAAGTTAGCTGCAGTGCCTTCATCAGG
 1180 1190 1200 1210 1220 1230 1240
 TTTGTAAGACTGTGAGAGAAGGTTAACACAGCTCTGTAATGGAGGAAGTTGATCCCTGATGAG
 1250 1260 1270 1280 1290 1300 1310
 GATTATAGCCTAGATGAAATTCAACTGAAGTCTCCAAATACCTGGGAAGAGTATGGTTCCCTGATGTG
 1320
 ATGCCTCTCTGG

FIG. 6B

10 20 30 40 50 60
MAGSEPRSGTNSPPPFSDWGRLEAAILSGWKTFWQSVSKDRVARTTSREEVDEAASLT

70 80 90 100 110 120
RLPIDVQLYIILSFLSPHDLQCLGSTNHYNNETVRNPILWRYFLLRDLPSWSSVDWKS LPY

130 140 150 160 170 180
LQILKKPISEVSDGAFFDYMAYVLMCCPYTRRASKSSRPMYGAUTSFLHSLIIPNEPRFA

190 200 210 220 230 240
LFGPRLEQLNTSLVLSLLSSEELCPTAGLPQRQIDGIGSGVNFQLNNQHKFNILILYSTT

250 260 270 280 290 300
RKERDRAREEHTSAVNKMFSRHNEGDDRPGSRYSVIPQIQKLCEVVDGFIYVANAEEAHKR

310 320 330 340 350 360
HEWQDEFSHIMAMTDPAGSSGRPLLVLSCISQGDVKRMPCFYLAHELHLLNHPWLVQ

370 380 390 400 410 420
DTEAETLTGFLNGIEWILEEVESKRAR*FSFQILGTETI*NLLRS*CEYLLSQPTLSCL

430 440 450 460 470 480
FADRLSFGQL*LLCFLYYFYFLP*INYKKRVSVLVFSPKMNL*TFFW*FLYFLSF*KY*I

L

FIG. 7A

10 20 30 40 50 60
 ATGGCGGGAAAGCGAGCCGCGCAGCGGAACAAATTGGCGCCGGCCCTTCAGCGACTGGGGCGCGCTG
 70 80 90 100 110 120 130
 GAGGGGGCCATCCTCAGCGGCTGGAAAGACCTCTGGCAGTCAGTGAGCAACGGATAGGGTGGCGCTACG
 140 150 160 170 180 190 200
 ACCTCCCCGGAGGGAGGTGGATGAGGGGGCCACGCCACCTGAGCGGGCTGCCGATTGATGACAGCTATAT
 210 220 230 240 250 260 270
 ATTTTGTCTTCTTCAACCTCATGATCTGTGTCAGTTGGAAACTACAATCATTATTGGAATGAAACT
 280 290 300 310 320 330 340
 GTARGAAATCCAATTCTGTGGAGATACTTTTGTGAGGGATCTTCTTCTTGGTCTCTGTGACTGG
 350 360 370 380 390 400 410
 AAGTCTCTCCATATCTACAAATCTTAAAAAAGCTATATCTGAGGTCTGTGATGGTGCATTTTGAC
 420 430 440 450 460 470 480
 TACATGGCAGTCTATCTAATGTGCTGCCATACACAAGAAGAGCTCAAAATCCAGCCGCTCTATGTAT
 490 500 510 520 530 540 550
 GGAGCTGTCACTCTTTTACACTCCCCTGATCATCCCAATGAAACCTCGATTTGCTCTGTTGGACCA
 560 570 580 590 600 610 620
 CGTTTGGAAACAATTGAAATACCTCTTGGTGTGAGCTTGTCTTCAGAGGAACCTGGCAACAGCT
 630 640 650 660 670 680 690
 GGTTTGCCTCAGAGGCAGATTGATGGTATTGGATCAGGAGTCATTTCAAGTGAACAACCAACATAAA
 700 710 720 730 740 750
 TTCAACATTCTAATCTTATTCAACTACCAGAAAGGAAGAGATAGAGCAAGGGAAAGGACATACAAGT
 760 770 780 790 800 810 820
 GCAGTTAACAGATGTTAGTCAGTCGACACAAATGAAAGGTGATGATCGACCAGGAAGCCGGTACAGTGTGATT
 830 840 850 860 870 880 890
 CCACAGATTCAAAACTGTGTGAAGTGTAGATGGGTCATCTATGTTGCAAAATGCTGAACCTCATAAA
 900 910 920 930 940 950 960
 AGACATGAATGGCAAGATGAATTTCATATTATGGCAATGACAGATCCAGCCTTTGGGTCTTCGGGA
 970 980 990 1000 1010 1020 1030
 AGACCAATTGTTGGTTTATCTGTATTCTCAAGGGATGTAAGAATGCCCTGTTTTATTGGCT
 1040 1050 1060 1070 1080 1090 1100
 CATGAGCTGCATCTGAATCTCTAAATCACCCATGGCTGGTCCAGGATACAGAGGCTGAAACTCTGACT
 1110 1120 1130 1140 1150 1160 1170
 GGTTTTTGAATGGCATTGAGTGGATTCTGAGAAGAATGAACTAAGCGTCAAGATGATTCTCTTT
 1180 1190 1200 1210 1220 1230 1240
 CAGATCTTGGAACTGAAACCATTTGAAATTATTACTAAGGTGATGTGAATATTGCTCAGTCAG
 1250 1260 1270 1280 1290 1300 1310
 CCCACCTTGTCTGCCCTTTGCAAGTAGGGCTTCATTGGACAGCTATAACTGCTGTGTTTTTATAT
 1320 1330 1340 1350 1360 1370 1380
 TATTTTACTTTTACCATTAATCAATTACAAGAAAAGAGTTCACTGCTTAGTATTAGCCCCAAATG
 1390 1400 1410 1420 1430 1440
 AACCTTTAACATTTTGGTAATTTTATATTCTGTCTTTAAATATTAAATTGG

FIG. 7B

10	20	30	40	50	60
MSRRPCSCALPPRCSCSASPASVTAAGRPRPSDSCKEESSTLSVKMKCDFNCNHHSGL					
70	80	90	100	110	120
KLVKPDDIGRLVSYTPAYLEGSCCKDCIKDYERLSCIGSPIVSPRIVQLETESKRLHNKEN					
130	140	150	160	170	180
QHVQQTLNSTNEIEALETSRLYEDSGYSSFSLQSGLSEHEEGSLLEENFGDSLQSCLLQI					
190	200	210	220	230	240
QSPDQYPNKNLLPVLHFEKVVCASTLKKNAKRNPKVDRMLKEITARGNFRQLQNIIGRKMG					
250	260	270	280	290	300
LECVVDILSELFRRGLRHVLATILAQLSDMDLINVKVSTTWKKILEDDKGAFQLYSKAIQ					
310	320	330	340	350	360
RVTEENNKFSPHASTREYVMFRTPLASVQKSAAQTSLKKDAQTKLSNQGDQKGSTYSRHN					
370	380	390	400	410	420
EFSEVAKTLKKNESLKACIRCNSPAKYDCYLQRATCKREGCGFDYCTKCLCNYHTTKDCS					
430	440				
DGKLLKASCKIGPLPGTKSKKNLRL					

FIG. 8A

10 20 30 40 50 60 70 80 90
 AGCTTGCTCAGCTCCCCCGGAGCGGTCTCCACCTGAGCCAGACACCCACCTGGTTGGCATGAGCCGGCCCCCTGCAGCTGCGCCCTACGG
 100 110 120 130 140 150 160 170 180
 CCACCCCCCTGCCTCTGCAGGCCAGCCCCAGCCAGTGACAGGCCCCGGGCCCCCTGCACCTCGGATAGTTGTAAGAAGAAAGTTCTACCC
 190 200 210 220 230 240 250 260 270 280
 TTCTCTCTCTAAAGTGTGATTTTAACTGTAACCATGTTCTCCGGACTTAAGCTGGTAAACCTGATGACATGGAAAGACTAGTTCTCA
 290 300 310 320 330 340 350 360 370
 CACCCCTGCATATCTGAAAGGTTCTGTAAGACTGCATTAAGACTATGAAAGGCTGTCATGTTGGGTACCGATTTGAGCCCTAGGATT
 380 390 400 410 420 430 440 450 460 470
 GTACAACTGAAACTGAAAGCAACCGCTTGCAATAACAGAAATCAACATGTCACAGACACTTAAGTACAAATGAAATGAAAGCACTAG
 480 490 500 510 520 530 540 550 560
 AGACCACTAGACTTTATGAAAGACAGTGGCTATTCTCATTTCTACAAAGTGGCTCAGTGAACATGAAAGGTTAGCCCTGGAGGAGA
 570 580 590 600 610 620 630 640 650
 TTTCGGTGACACTCTACAACTCTGGCTACAAATACAAAGGCCAGACCAATATCCCAACAAAGCTTCTGTCAGGCTGCAAGGAAATT
 660 670 680 690 700 710 720 730 740 750
 GTGCTTGTCAACATTTAAAGAATGCAAAAGCAATCTAAAGTACATGGAGATCTGAAAGGAAATTATAGCCAGAGGAATTTTAGAC
 760 770 780 790 800 810 820 830 840
 TCCACAAATATAATCCAGAAAAATGGGCTAGAATGTTAGATATTCTCAGCGAACCTTTGCAAGGGGACTCAGACATGCTCTAGCAACTAT
 850 860 870 880 890 900 910 920 930 940
 TTTAGCACAACTCAGTACATGGACTTAATCAATGTCATAAGTGACCAACCTTGGAAAGAAGATCTTAGAACATGATAAGGGGGCATCCAG
 950 960 970 980 990 1000 1010 1020 1030
 TTGTCACAAAGCAATACAAAGAGTTACCGAAAAACACAATAATTTCACCTCATGCTTCAACCGAGAAATATGTTATGTCAGAACCCAC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TGGCTTCTGTTAGAAATCAGCAGGCCAGACTTCTCTAAAGATGCTCAACCAAGTATTCACATCAAGGTGATCAGAAAGGTTCTACTTA
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TAGTCGACACAAATGAAATTCTCTGAGGTGCAACGACATTGAAAGAAGCAAGGCTCAAGGCTGTTACCTGTAATTCAACCTGCAAAATAT
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 GATTGCTATTCTACACGGGCAACCTCCAAACGAGAAGGCTGTCGATTGATTAGTACGAAGTGTCTCTGTAATTCTACATACTAAAGACT
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 GTTCAGATGCCAACCTCTCAAAGCCAGTTGTAATAAGTCCCTGGCTGGTACAAAGAAAAGCAAAAGGAAATTACGAAGATTGATCTCT
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTTAAATCAATTGTTACTGATCATGAAATGTTAGAATGTTAGGTTAACTTAAAGGAAATTGTTAGTGTATTCTCAATTCTATGTTG
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 AAATCGGTAGTATCCTGAGGTTTTCTCCCCAGAAGATAAGGAGTAGACACCTCTTAAATATTCTACAATTAAATGAGAAAAAGT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 TTTAAATCTCAATACAAATCAACAAATTAAAGAAAAAGAAAAGTAGATAGTGTGATCTGAGGGTAAAAAAATTGATCTCAA
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 TTTTATGTAAGGAAACCCATGCAATTCTACCTAGACAGTCTTAATATGTCGTTTCCATCTGTTAGGATTCTAGACATTCTATGTCCT
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
 CTTACTCAATTGATACCAACAGAAAATATCAACTCTGGAGTCATAAATGTCACCTTCTAAAGCTTTTCTAAAGCTTTTCTATGTCGTT
 1890 1900 1910 1920 1930 1940 1950 1960 1970
 CAAGAAAGTATCTCTGTAAGAAACTGCTTCTTCTTATTCGAAATCTGTTAATATTGTTAGTACATGTAATATTCTGTT
 1980 1990 2000 2010 2020 2030 2040 2050 2060
 TATATGTCACAAAGAATATGTCCTGATGACATATAAAATTTGCTCAATAAAATTGCTAAAGCTTAAAGAAAAAAACTCGAG
 2070
 ACTAGTCC

FIG. 8B

10 20 30 40 50 60
ARSGASALRRRRVQVVVLSRPPPGGDSFRTRPQRGPQPGGSQAMDAPHSKAALDSINE

70 80 90 100 110 120
LPDNILLELFTHVPARQLLNCRVCSLWRDLIDLLTLWKRKCLRKGFITKDWDQPVADW

130 140 150 160 170 180
KIFYFLRSLHRNLLRNPCAENDMFAWQIDFNGGDRWKVDSDLPGAHGTEFPDPKVKKSFVT

190 200 210 220 230 240
SYELCLKWELVDLLADRYWEELLDTFRPDIVVKDWFAARADCGCTYQLKVQLASADYFVL

250 260 270 280 290 300
ASFEPVVTIQQWNNAWTTEVSYTFSDYPRGVRYILFQHGGRDTQYWAGWYGPRTVNSSI

310 320 330
VVSPKMTRNQASSEAQPGQKHGQEEAAQSPYGAQQIF

FIG. 9A

10 20 30 40 50 60 70 80 90
 GCGCGTTCCGGAGCTCGGCGCTCGCGTAGGAGCCGGTCCAGGTGCGGTGCTGACGGGCCCCGGCTGGAGGGGAGACAGCTTCAGGACAC
 100 110 120 130 140 150 160 170 180
 GCAGGGCCAGCGAGGGCCGGCCGGGGATCCAGGCCATGGACGGCTCCCCACTCCAAAGCAGCCCTGGACAGCATTAAACGAGCTGCCGA
 190 200 210 220 230 240 250 260 270 280
 TAACATOCCTGCTGGAGCTGTTACGCACGTGCCGGGGGCCAGCTGCTGCTGAACCTGCCGCTGGCTGAGGCTCTGGGGACCTCATGAC
 290 300 310 320 330 340 350 360 370
 CTCCCTGACCCCTCTGAAAGCAGTGCCTGCCAAAGGGCTCATCACCAAGGACTGGGACCAGCCCCGTCGGCCGACTGGAAAATCTTCTACTCTCC
 380 390 400 410 420 430 440 450 460 470
 TACCGAGCCCTGCATAGGAACCTCTGCCAACCCCTGCTGAAACGATACTTTGCTGCAATTGATTTCATGGTGGGGACCGCTGGAA
 480 490 500 510 520 530 540 550 560
 GGTGGATAGCCTCCCTGGGGACAGAAATTCTGACCCCAAAGTCAGAAAGTCTTTGTCACATCCTACAGAACAGTGTGCCCTCAAGTGG
 570 580 590 600 610 620 630 640 650
 GAGCTGGTGGACCTCTAGCCGACCGCTACTGGGAGGAGCTACTAGACACATTCCGGGGGACATGTCGGTTAAGGACTGGTTGCTGCCAGAG
 660 670 680 690 700 710 720 730 740 750
 CCCACTGTGGCTGCACCTACCAACTCAAAGTCAGCTGGCTCGGCTGACTACTTCGTGTTGGCCTCTTCGAGCCCCCACCTGTGACCATCCA
 760 770 780 790 800 810 820 830 840
 ACAGTGGAAACAATGCCACATGGACAGAGGTCTCTACACCTTCAGACTACCCCGGGGTGTCGGCTACATCCTCTTCAGGACATGGGGCAGG
 850 860 870 880 890 900 910 920 930 940
 GACACCCAGTACTGGCAGGCTGGTATGGGCCCCAGTCACCAACAGCAGCATGTCAGGCTGACGATGGCCCTACGGACCTGTTGTCAGATTTCGACAGCTGTCCATCCTGTG
 950 960 970 980 990 1000 1010 1020 1030
 AGGCTAGCCCTGGGAGAACATGGACAGGAGGGCTGCCAATGCCCTACGGACCTGTTGTCAGATTTCGACAGCTGTCCATCCTGTG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TCTGGTCAGCCAGAGGTTCTCCAGGCAGGAGCTGAGCATGGGCTGGGACTGAGGTCCTGTACCCAGCTCTGCCCGGTTCAACCCCTA
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CCAGCTGTGGTAACCTACTGTCACATAGCTCTGACGTTTGTAAATAATGTTTCAAGGCCCCACTGTGGCTCACCCCTGTAATCCAG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 CACTTTGGAGACCGAGGGCAGGTGATCACCAGGTCAAGGAGACAGAACCCATCCTGGCAACACGGTGAAACCCCTGTCCTACTAAAAACAA
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 AAAATTAGCCCCGGTGGTGGGGGGCCCTGAGTCCAGCTACTCGGGAGGCTGATGCCAGAAGAACGGTGAACCCGGAGGGCAGAGCTG
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 AGTCACCCGAGATCACGCCACTGCACTCCAGCTGGTACAGAGGGAGACTCTGCTCATAAAAATAATAATAATAATAATAATA
 1510 1520 1530
 AATGGTTTCAGTAAAAAAAAAAAAA

FIG. 9B

10 20 30 40 50 60
MSNTRFTITLNYKDPLTGDEETLASYGIVSGDLICLILHDDI PPPNIPSSTDSEHSSLQN

70 80 90 100 110 120
NEQPSLATSSNQTSIQDEQPSDSFQGQAAQSGVWNDDSMGLGPSQNFEAESIQDNAHMAEG

130 140 150 160 170 180
TGFYPSEPLLCSESVEGQVPHSLETLYQSADCSDANDALIVLILHLLMLESGYIPQGTEAK

190 200 210 220 230 240
ALSLPEKWKLSGVYKLQYMHHLCEGSSATLTCVPLGNLIVVNATLKINNEIRSVKRLQLL

250 260 270 280 290 300
PESFICKEKLGENVANIYKDLQKLSRLFKDQLVYPLLAFTRQALNLPNVGLVVLPLELK

310 320 330 340 350 360
LRIFRLLDVRSVLSLSAVCRDLFTA NDPLLWRFLYLRDFRDNTVRVQD TDWKELYRKRH

370 380 390 400 410 420
IQRKESPKGRFVLLLPSSHTIPFYPNPLHPRPFSSRLPPGIIGGEYDQRPTLPYVGDP

430 440 450 460 470 480
ISSLIPGPGETPSQLPPLRPRFDVGPLPGPNPILPGRGGPNDRFPFRPSRGRPTDGRLS

FM

FIG. 10A

10 20 30 40 50 60 70 80 90
 TCGAATCCCATGGACCATGTCTAAACCCGATTTACAATTACATGAACTACAAGGATCCCTCACTGGAGATGAAGAGACCTGGCTTCATA
 100 110 120 130 140 150 160 170 180
 TGGGATGTGTTCTGGGGACTTGTATGTTGATTCACCGATGACATTCCACCCGCTAATATACCTTCATOCACAGATTCAAGACATTCTCA
 190 200 210 220 230 240 250 260 270 280
 CTCCAGAACAAATGACCAACCCCTTTGGCCACCGCTCCAAATCACAGACTAGCATACAGGATGAAACAACCAAGTGAATTCATCCAAAGGACAGGAG
 290 300 310 320 330 340 350 360 370
 CCCAGTCTGGTGTGGAAATGACGACAGTATGTTAGGGCTAGTCAAATTGGAGCTGAGTCAAATTCAAGATAATGCCATATGGCAGAGGG
 380 390 400 410 420 430 440 450 460 470
 CACAGGTTCTATCCCTCAGAACCCCTGCTCTGTAGTGAATCGGTGGAGGGCAAGTGGCACATTCAATTAGAGACCTTGATCAATCAGCTGAC
 480 490 500 510 520 530 540 550 560
 TGTTCCTGATGCCAATGATGGTTGATAGTGTGATACATCTTCATGTTGGAGTCAGGTACATACCTCAGGGCACCGAAGCCAAAGCACTGT
 570 580 590 600 610 620 630 640 650
 CCCCTGGGAGAAGTGAAGTTGAGCGGGGTGATAAGCTGCACTACATCCATCTCTGGAGGGCAGCTCGCTACTCTCACCTGTGTGCC
 660 670 680 690 700 710 720 730 740 750
 TTGGGAAACCTGATGTTGATAATGCTACACTAAAAATCAACAAATGAGATTAGAAGTGTGAAAGATTGAGCTGCTACCCAGAAATCTTTATT
 760 770 780 790 800 810 820 830 840
 TCCAAAGAGAAAATAGGGAAAATGTAGCCAAACATATACAAAGATCTTCAGAAACTCTCTCCCTCTTTAAAGACCAGCTGGGTATCCCTTC
 850 860 870 880 890 900 910 920 930 940
 TGGCTTTACCCGACAAGCACTGAACCTACCAAAATGTTGGTTGGTCTCTCCATTCGAACACTGAAACACTACGGATCTCCGACTCTGG
 950 960 970 980 990 1000 1010 1020 1030
 TGTTCGTTCCGTCTGCTTTGCTGGCGTTGCTGACCTCTTACTGCTTCAAATGACCCACTCTGTGGAGGTTTATATCTGGCTGAT
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTCCAGACAAATCTGTCAGAGTTCAAGACACAGATTGAAAGAACACTGTACAGGAAGAGGGCACATAAAAGAAAAGAATCCCCAAAGGGCGGT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TTGTCCTGCTCTGCCATCGTCAACCCACACCCATTCCATCTATCCCAACCCCTGACCCACTCTGTGGAGGTTTATATCTGGCT
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 AATTATGGGGGTGAATATGACCAAAGACCAACACTCTCCATGTTGGAGACCCAACTCAGTCACTCATCCCTGGCTCTGGAGACGCCAC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 CAGTTACCTCCACTGAGACCAACGGCTTGTGATCCAGTTGGCCACCTCCAGGACCTAACCCATCTGCCAGGGCAGGCAGGCCAAATGACAGAT
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTCCCTTAGACCCAGCAGGGTGGCCAACTGATGGGGCTGCTGATTCATGATTGATTGATTTCTGATTGTTGGCTCCATTGTT
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 TGTTCCTAAACTACAGATGTCACTCCTGGGGCTGCTGATCTGGAGTGTATTTCTGATTGTTGGCTGAGAGTGGCACTCCAGAACCTTT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 AAGAGATACTTATAGCCCTAGGGTGGTATGACCCAAAGGTTCTCTGTGACAAGGTTGGCTTGGGAATAGTTGGCTGCCAATCTCCCTGC
 1700 1710 1720 1730 1740 1750 1760

FIG. 10B

10	20	30	40	50	60
ETSKLG*SAVLAPAAGGTLSSEGRSAVGILIAVTSTGVDK*SLNQLLHGLGTSSRLSHF					
70	80	90	100	110	120
PFG*KSPPRGQFVAAVEIAGRSGLQMGGQLWRVVRNQQQLQQEGYSEQGYLTREQSRRMA					
130	140	150	160	170	180
ASNISNTNHRKQVQGGIDYHLLKARKSKEQEGFINLEMLPPELSFTILSYLNATDLCLA					
190	200	210	220	230	240
SCVWQDLANDELLWQGLCKSTWGHCSIYNKNPLGFSFRKXYMQLDEGSLTFNANPDEGV					
250	260	270	280	290	300
NYFMSKGILDSPKEIAKFIFCTRNLNWKKLRIYLDERRDVLDLVTLNFRNQFLPNAL					
310	320	330	340	350	360
REFFRHIHAPEERGEYLETLITKFSHRCACNPDLMRELGLSPDAVYVLCYSLILLSIDL					
370	380	390	400	410	420
TSPHVKNKMSKREFIRNTRRAAQNISEDFVGHLYDNIYLIGHVAA*KAQLLGLQFLQLQTK					
430	440	450	460	470	480
ATQGLSRYGGYISAGHCSLSIQSSFSVQPFLLPFSILVISLGN*IILQNFS*FCLSRFA					
490	500	510	520	530	540
QSRATV*HSC*RMIN*HYTLKDGVFVH*ICLKNIHFHSLYKYHVMCTYLTKEIYSHNYF					
550	560	570	580	590	600
IVKILTKVFPFLSN*VLKFI*F*SETIVXVKVRSDFRQKPIPASFSFKL*RVLICYYITM					
610	620	630	640	650	
QNWLQLFL*YKFII*FFILKTGLIKSR*VL*TI*DF*NIKIYDLHS*E*NKIXLELW					

FIG. 11A

10 20 30 40 50 60 70 80 90
 CGAAACGTCAAAATGGATAGTOGGCAGTTCTGGCCCCCTGCAGCTGGAGGTACCCCTGAGTTCTGAGGGTCTGAGTGCCTGTTCTGGTATTCTC
 100 110 120 130 140 150 160 170 180
 ATCCGGTCACCTCTACCGGTGCGACAAAGTAAAGTTGAATCAGCTCTCCATGGCCTGGCACCAAGTCCCGGCTGAGCCATTTCCTTTTG
 190 200 210 220 230 240 250 260 270 280
 GCTAAAGTCCCCCCCAGGGCAATTGTCGGGGGGTGGAGATGCCAGGTGGCTCAGGCTTGAGATGGTCAAGGGTGTGGAGAGT
 290 300 310 320 330 340 350 360 370
 CGTCAGAACCAACGAGCTGCAACAAGAAGGCTACAGTCAGCAACCCCTACCTCACCAAGAGGAGGAGGAGAATGGTGGAGAACATTCT
 380 390 400 410 420 430 440 450 460 470
 AACACCAATCATGTAACAAAGTCCAGGAGGCATTGACATATATCATCTTGAAGGCAAGGAATCGAAGAACACGAAAGGATTCAATT
 480 490 500 510 520 530 540 550 560
 TCGAAATGTTGCCCTGAGCTAACGTTACCATCTGCTTACCTGAACTGACCTTGCTGGCTCATGTTGGACCTTGC
 570 580 590 600 610 620 630 640 650
 GAATGATGAACTTCTCTGGCAAGGGTGTGCAAATCCACTTGGGTCACTGTTCCATATAACAATAAGAACCCACCTTAGGATTCTTTAGA
 660 670 680 690 700 710 720 730 740 750
 AAATGCTATATGCCAGCTGGATGAGGCAGCCTCACCTTAAATGCCAACCCAGATGAGGGAGTGAACACTTATGTCACAGGGTATCCTGGATG
 760 770 780 790 800 810 820 830 840
 ATTCCCCAAAGAAATAGCAAAGTTTATCTCTGTAAGAACACTAAATGGAAAAAAACTGAGAAATCTATCTGATGAAACGGAGAGATGTCCT
 850 860 870 880 890 900 910 920 930 940
 CGATGACCTTGAAACATTGATAATTAGAAATCAGTTCTGCCAAATGCCACTGAGAGAATTTCGTCAATCCATGCCCTGAAAGGGT
 950 960 970 980 990 1000 1010 1020 1030
 CGAGAGTATGAAACTCTTATAACAAAGTCTCACATAGATTCTGCTTGCACCCCTGATTAAATGCGAGAACTTGGCTTACTGCTGATG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 CTGCTATGTACTGCTACTTGTGATTCTACTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATCTCAAAAGGGAAATTATTGCG
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 AAATACCCGTCGGCTGCTCAAAATATTAGTGAAGATTGTAGGGCATCTTATGACAATATCTACCTTATTGGCATGTGGCTGCATAAAA
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 GCACAACTGCTAGGACTTCAGTTTACTTCAGACTAAAGCTACCCAGGACTTACCGAGATATGGGGTTACATCAGTGTGGTATTGTAGCC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 TGAGTATACAATCAAGCTTCAGTGTGCAACCTTTTCTTGCATTTCTATTTAGTAATTCCCTGGGAACATAATAATTGCAAGAA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTTTCTAATTCTTATCACGTTTCCACAAAGCAGGCCACTCTAACACACCTGTTAACGAATGATAAATGACATTATACCTAA
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 GATGGTGTATTGTCATTAGATTGCTGCAAAACCTTATCCATTCTTACAAATACCATGTAATGTCATATTTAACTAAG
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 AGATTTATAGTCATAATTATTTATTGTAAGAGATTTAACTAAAGTTTCTTCTCAACTGAGTTCTGAAATTATTGATTCTGATC
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 TGAAACTATTGTCCTGCAAAAGTTAGATCTGACTTCAGRCAGAAACCAATACCGAGCTCCCTTTCTTAAACTTTGAAAGAGTGTGATTG
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
 TACTATATTACTATGCAAAACTGGCAGTTATTATATAATAATTATAATTGATTTTATTAAAACCTGGGTAATCAAGTCCTGGT
 1890 1900 1910 1920 1930 1940 1950 1960 1970
 AAGTCCTTAAACCATTTAGGATTAAACATCAAATTATGATTACATTACAGGAATAAAAATATYATTAGAACCTGCGT

FIG. 11B

10	20	30	40	50	60
MAAAAVDSAMEVVPALAEEAAPEVAGLSCLVNLPGEVLEYILCCGSLTAADIGRVSSTCR					
70	80	90	100	110	120
RLRELCQSSGKVVKEQFRVRWPSLMKHYSPTDYVNWLEEYKVRQKAGLEARKIVASF					
130	140	150	160	170	180
FFSEHVPNGFSDIENLEGPEIFFEDELVCILNMGRKALTWKYYAKKILYYLRQQKILN					
190	200	210	220	230	240
NLKAFLQQPDDYESYLEGAVYIDQYCNPLSDISLKDIAQIDSIVELVCKTLRGINSRHP					
250	260	270	280	290	300
SLAFKAGESSMIMEIELQSQVLDAMNYVLYDQLKFKGNRMDYYNALNLYMHQVLIRRTGI					
310	320	330	340	350	360
PISMSLLYLTIAQLGVPLEPVNFPSHFLLRWCQGAEGATLDIFDYIYIDAFGKGKQLTV					
370	380	390	400	410	420
KECEYLIGQHVTAAALYGVVNKKVLQRMVGNLLSLGKREGIDQSYQLLRDSL					
430	440	450	460	470	480
DQVQLLLLQARLYFHLGIWPEKVLDILQHIQTLDPGQHGAVGYLVQHTLEHIERKKEEVG					
490	500	510	520	530	540
VEVKLRSDEKHDVCYSIGLIMKHKRYGYNCVIYGWDPTCMMGHEWIRNMNVHSLPHGHH					
550	560	570	580	590	600
QPFYNVLVEDGSCRYAAQENLEYNVEPQEISHPDVGRYFSEFTGTHYIPNAELEIRYPED					
610	620				
LEFVYETVQNIYSAKKENIDE					

FIG. 12A

10 30 30 40 50 60 70 80 90 100 110 120 130
 140 150 160 170 180 190 200 210 220 230 240 250 260 270
 280 290 300 310 320 330 340 350 360 370 380 390 400 410
 420 430 440 450 460 470 480 490 500 510 520 530 540 550
 560 570 580 590 600 610 620 630 640 650 660 670 680 690
 700 710 720 730 740 750 760 770 780 790 800 810 820 830
 840 850 860 870 880 890 900 910 920 930 940 950 960 970
 980 990 1000 1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110
 1120 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220 1230 1240 1250
 1260 1270 1280 1290 1300 1310 1320 1330 1340 1350 1360 1370 1380 1390
 1400 1410 1420 1430 1440 1450 1460 1470 1480 1490 1500 1510 1520
 1530 1540 1550 1560 1570 1580 1590 1600 1610 1620 1630 1640 1650 1660
 1670 1680 1690 1700 1710 1720 1730 1740 1750 1760 1770 1780 1790 1800
 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940
 1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080
 2090 2100 2110 2120 2130 2140 2150 2160 2170 2180 2190 2200 2210 2220
 2230 2240 2250 2260 2270 2280 2290 2300 2310 2320 2330 2340 2350 2360
 2370 2380 2390 2400 2410 2420 2430 2440 2450 2460 2470 2480 2490 2500
 2510 2520 2530 2540 2550 2560 2570 2580 2590 2600 2610 2620 2630 2640
 2650 2660 2670 2680 2690 2700 2710 2720 2730 2740 2750 2760 2770 2780
 2790 2800 2810 2820 2830 2840 2850 2860 2870 2880 2890 2900 2910
 2920 2930 2940 2950 2960 2970 2980 2990 3000 3010 3020 3030 3040 3050
 3060 3070 3080 3090 3100 3110 3120 3130 3140 3150 3160 3170 3180 3190
 3200 3210 3220 3230 3240 3250 3260 3270 3280 3290 3300 3310 3320 3330
 3340 3350 3360 3370 3380 3390 3400 3410 3420 3430 3440 3450 3460 3470
 3480 3490 3500 3510 3520 3530 3540 3550 3560 3570 3580 3590 3600 3610
 3620 3630 3640 3650 3660 3670 3680 3690 3700 3710 3720 3730 3740 3750
 3760 3770 3780 3790 3800 3810 3820 3830 3840 3850 3860 3870 3880 3890
 3900 3910 3920 3930 3940 3950 3960 3970 3980 3990 4000 4010 4020 4030
 4040 4050 4060 4070 4080 4090 4100 4110 4120 4130 4140 4150 4160

FIG. 12B

10 20 30 40 50 60
RSTGFRAGEEWSR*XLAASPGXLRRPAXTFVLSNLAEVVERVLTFLPAKALLRVACVCR
70 80 90
LWRECVRRVLRTHRSVTWISAGLAEAGHLXGH

FIG. 13A

10. 20 30 40 50 60
CCGTAGTACTGGNTTCCGGCGGGCTGGTGAGGAATGGAGCCGGTAGNTGCTTGCAGCGAG
70 80 90 100 110 120
TCCCGGGNTCCTCCGTAGACCCCGCGGANACCTTCGTGTTGAGTAACCTGGCGGAGGTGGT
130 140 150 160 170 180
GGAGCGTGCTCACCTCCCTGCCGCCAAGGCAGTTGCTGCCGGTGGCCTGCGTGTGCCG
190 200 210 220 230 240
CTTATGGAGGGAGTGTGTGCGCAGAGTATTGCGGACCCATCGGAGCGTAACCTGGATCTC
250 260 270
CGCAGGCCTGGCGGAGGCCGGCACCTGGNGGGCATT

FIG. 13B

FIG. 14A

10 20 30 40 50 60
GCGGCCGCGCCGGTGCAGCAACAGCAGCAGCAGCCCCGGCAGCAGGCCGCCAGCC

70 80 90 100 110 120
GCCCGAGCAGCAGCCGCCCCAGCAGCAGCAGCCTCCGCCGCCAGCAGCAGCAGCAGCA

130 140 150 160 170 180
GCAGCCTCCGCCGCCACCAGCCCTCCGCCCTGCCTCAGGAGCGGAACAACGTCGG

190 200 210 220 230 240
CGAGCGGGATGATGATGTGCCCTGCAGATATGGTTGCAGAAGAATCAGGTCCCTGGTGCACA

250 260 270 280 290 300
AAATAGTCCATACCAACTTCGTAGAAAAACTCTTTGCCGAAAAGAACAGCGTGTCCCAC

310 320 330 340 350 360
AAAGAACAGTATGGAGGGCGCCTCAACTCAACTACAGAAAACCTTGGTCATCGTGCAAA

370 380 390 400 410 420
ACGTGCAAGAGTGTCTGGAAAATCACAGATCTATCAGCAGCACCTGCTGAACAGTATCT

430 440 450 460 470 480
TCAGGAGAAAATGCCAGATGAAGTGGTTCTAAAATCTTCTTTACTTGCTGGAACAGGA

490 500 510 520 530 540
TCTTGTAGAGCAGCTGTATGTAAACGCTTCAGTGAACCTGCTAATGATCCCAATTT

550 560 570 580 590
GTGGAAACGATTATATGGAAGTATTGAATATACTCGCCCTATGATGCAT

FIG. 14B

10	20	30	40	50	60
RPRPGLRGGRAPCEVTMEAGGLPLELWRMILAYLHLPDLGRCSLVCRAWYELILSLDSTR					
70	80	90	100	110	120
WRQLCLGCTECRHPNWPQNQPDVEPESWREAFKQHYLASKIWTKNALDLESSICFSLFRRR					
130	140	150	160	170	
RERRTLSVGPGRFDSDLGSALAMASLYDRIVLFPGVYEEQGEIILKVPVEIVGQGKLG					

FIG. 15A

10 20 30 40 50 60
GCGGCCGCGGCCGGACTCCGCGGTGGCGAGCGCCCTGTGAGGTGACCATGGAGGCTGG
70 80 90 100 110 120
TGGCCTCCCCCTGGAGCTGTGGCCATGATCTTAGCCTACTTGCACCTCCCGACCTGGG
130 140 150 160 170 180
CCGCTGCAGCCTGGTATGCAGGGCCTGGTATGAAC TGATCCTCAGTCTCGACAGCACCCG
190 200 210 220 230 240
CTGGCGGCAGCTGTCTGGGTTGCACCGAGTGCCGCCATCCCAATTGGCCCAACCAGCC
250 260 270 280 290 300
AGATGTGGAGCCTGAGTCTTGGAGAGAAGCCTTCAAGCAGCATTACCTTGCATCCAAGAC
310 320 330 340 350 360
ATGGACCAAGAACATGCCTTGGACTTGGAGTCTCCATCTGCTTTCTATTCCGCCGGAG
370 380 390 400 410 420
GAGGGAACGACGTACCCCTGAGTGTGGCCAGGCCGTGAGTTGACAGCCTGGCAGTGC
430 440 450 460 470 480
CTTGGCCATGCCAGCCTGTATGACCGAATTGTGCTCTCCAGGTGTACGAAGAGCA
490 500 510 520 530
AGGTGAAATCATCTTGAAGGTGCCTGTGGAGATTGTAGGGCAGGGGAAGTTGGGTGA

FIG. 15B

10	20	30	40	50	60
ETETAPLTESLPTDPLLILSFLDYRDLINCCYVSRRSQLSSHDPLWRRHCKYWLIS					
70	80	90	100	110	120
EEEKTQKNQCWKSLFIDTYSDVGRYIDHYAAIKKASGMISRNIWSPGVLGWVLSLKEGCS					
130	140	150	160	170	180
RGRPRCCGSADWAASFLEDDYRCSYRIHNGQKLGVSGWGYWEAWHCLITIVLKIC*TSIQLP					
190	200	210	220	230	240
EIPAETGTEILSPFNFCIHTGLSQYIAVEAAEG*NNEVFYQCQTVERVFKYGIKMCSDG					
250					
CINGMH*VFS					

FIG. 16A

10 20 30 40 50 60
 GAGACCGAGACGGCGCCGCTGACCCCTAGAGTCGCTGCCACCGATCCCCTGCTCCTCATC
 70 80 90 100 110 120
 TTATCCTTTTGGACTATCGGGATCTAACACTGTTGTTATGTCAGTCGAAGAGATTAAGC
 130 140 150 160 170 180
 CAGCTATCAAGTCATGATCCGCTGTGGAGAAGACATTGCAAAAAACTGGCTGATATCT
 190 200 210 220 230 240
 GAGGAAGAGAAAACACAGAAGAACAGAACATCAGTGTGGAAATCTCTTCATAGATACTTACTCT
 250 260 270 280 290 300
 GATGTAGGAAGAGATACTTGACCATTATGCTGCTATTAAAAAGGCCTGGGAATGATCTCA
 310 320 330 340 350 360
 AGAAATATTGGAGGCCAGGTGTCCTCGGATGGTTTATCTCTGAAAGAGGGTGCTCG
 370 380 390 400 410 420
 AGAGGAAGACCTCGATGCTGTGGAAAGCGCAGATTGGGCTGCAAGTTCCCTGGACGATTAT
 430 440 450 460 470 480
 CGATGTTCATACCGAATTACAATGGACAGAACAGTTAGTGGTTCTGGGTTATTGGAA
 490 500 510 520 530 540
 GCATGGCACTGTCTAACATCGTTCTGAAGATTTGTTAGACGTCGATACAGCTGCCG
 550 560 570 580 590 600
 GAGATTCCAGCAGAGACAGGGACTGAAATACTGTCCTCCCTTAACCTTGCATACATACT
 610 620 630 640 650 660
 GGTTGAGTCAGTACATAGCAGTGGAAAGCTGCAGAGGGTTGAAACAAAAATGAAGTTTC
 670 680 690 700 710 720
 TACCAATGTCAGACAGTAGAACGTGTGTTAAATATGGCATTAAAGATGTGTTCTGATGGT
 730 740 750
 TGTATAAATGGCATGCATTAGGTATTTCAAG

FIG. 16B

10 20 30 40 50 60
GSGFRAGGWPLTMPGKHQHFQEPEVGCCGKYFLFGFNIVFWVLGALFLAIGLWA
GEKGV

70 80 90 100 110 120
LSNISALTDLGGLDPVWLVC
GSWRRHVGAGLCWA
AIGALRENTFLLKFFXXFLGLIFFLE

LA

FIG. 17A

10 20 30 40 50 60
GGCTCCGGTTCCGGGCCGGCGGGTGGCCGCTCACCATGCCCGGNAAGCACCAGCATTTC

70 80 90 100 110 120
CAGGAACCTGAGGTCGGCTGCGGGAAATACTTCCCTGTTGGCTTCAACATTGTCTTC

130 140 150 160 170 180
TGGGTGCTGGGAGCCCTGTTCTGGCTATCGGCCTCTGGCCTGGGGTGAGAAGGGCGTT

190 200 210 220 230 240
CTCTCGAACATCTCAGCGCTGACAGATCTGGGAGGCCTTGACCCCGTGTGGCTTGT

250 260 270 280 290 300
GGTAGTTGGAGGCCTCATGTCGGTCTGGCTGGGCTTGCTGGCTGCAATTGGGGCCCTCCGG

310 320 330 340 350 360
GAGAACACCTTCCTGCTCAAGTTCTNCNGTTCCCTGGTCTCATTTCTTCCTGGAG

CTGGCAAC

FIG. 17B

10 20 30 40 50 60
AAAAAAAYLDELPEPLLRVLAALPAAELVQACRLVCLRWKELVDGAPLWLLKCQQEGLVP

70 80 90 100 110 120
EGGVEEERDHWQQFYFLSKRRRNLLRNPCGEEDLEGWCDVEHGGDGWRVEELPGDAGVEF

130 140 150 160 170 180
THDESVKKYFASSFEWCRKAQVIDLQAEGYWEELLDTTQPAIVVKDWYSGRSDAGCLYEL

190 200 210 220 230 240
TVKLLSEHENVLAEFSSGQVAVPQDSDGGGWMEISHTFTDYGPGVRFVRFEHGGQGSVYW

250
KGWFGARVTNSSVWVEP*

FIG. 18A

10 20 30 40 50 60
 GCGGGCGGCCGCGTACCTGGACGAGCTGCCGAGCCGCTGCTGCGCGTGGCCGCACTG
 70 80 90 100 110 120 130
 CCGGGCGCCGAGCTGGTGCAGGCCCTGCCCTGGTGTGCCTGCGCTGGAAGGAGCTGGTGGACGGCGCC
 140 150 160 170 180 190 200
 CCGCTGTGGCTGCTCAAGTGCCAGCAGGAGGGCTGGTGCCTGAGGGCGGCTGGAGGAGGAGCGCGAC
 210 220 230 240 250 260 270
 CACTGGCAGCAGTCTACTTCCTGAGCAAGCGGCCGCAACCTCTGCGTAACCGTGTGGGGAAAGAG
 280 290 300 310 320 330 340
 GACTTGGAAAGGCTGGTGTGACGTGGAGCATGGTGGGGACGGCTGGAGGGTGGAGGAGCTGCCTGGAGAC
 350 360 370 380 390 400 410
 AGTGGGTGGAGTTCACCCACGATGAGAGCGTCAAGAAGTACTTCGCCTCCCTCTTGAGTGGTGTGCG
 420 430 440 450 460 470 480
 AAAGCACAGGTCAATTGACCTGAGGCTGAGGGCTACTGGGAGGAGCTGCTGGACACGACTCAGCCGCC
 490 500 510 520 530 540 550
 ATCGTGGTGAAGGACTGGTACTCGGCCGAGCGACGCTGGTTGCCTCTACGAGCTCACCGTTAAGCTA
 560 570 580 590 600 610 620
 CTGTCCGAGCACGAGAACGTGCTGGTGGAGTTCACGCAGCGGGCAGGTGGCAGTGCCCCAACAGACAGTGAC
 630 640 650 660 670 680 690
 GGCGGGGGCTGGATGGAGATCTCCCACACCTTACCGACTACGGGCCGGCGTCCGCTTGTCCGCTTC
 700 710 720 730 740 750
 GAGCACGGGGGGCAGGGCTCCGTACTGGAAGGGCTGGTTCGGGGCCCCGGTGACCAACAGCAGCGTG
 760 770
 TGGGTAGAACCTGA

FIG. 18B

10	20	30	40	50	60
MGEKAVPLLRRRVKRSCPSCGSELGVEEKRGKGNPISIQLFPPPELVEHIISFLPVRDLV					
70	80	90	100	110	120
ALGQTCRYFHEVCDGEGVWRRICRRLSPRLQDQDTKGLYFQAFGGRRRCLSKSVAPLLAH					
130	140	150	160	170	180
GYRRFLPTKDHVFILDYVGTLFFLKNALVSTLGQMOWKRACRYVVLCRGAKDFASDPRCD					
190	200	210	220	230	240
TVYRKLYVLATREPQEVVGGTSSRACDCVEVYLQSSGQRVFKMTFHHSMTFKQIVLVGQ					
250	260	270	280	290	300
ETQRALLLITEEGKIYSLVVNETQLDQPRSYTQLALRKVSHYLPHLRVACMTSNQSSTL					
310					
YVTDPILCSWLQPPWPAGG					

FIG. 19A

10 20 30 40 50 60
 ATGGGCGAGAAGGCGGTCCCTTGCTAAGGAGGAGGCGGGTGAAGAGAAGCTGCCCTTGTGGCTCG
 70 80 90 100 110 120 130
 GAGCTTGGGTTGAAGAGAAGAGGGGGAAAGGAAATCCGATTCCATCCAGTTGTTCCCCCAGAGCTG
 140 150 160 170 180 190 200
 GTGGAGCATATCATCTCATTCCCTCCCAGTCAGAGACCTTGGCCCTCGGCCAGACCTGCCCTACTTC
 210 220 230 240 250 260 270
 CACGAAGTGTGCGATGGGAAGGCCTGTGGAGACGCATCTGTCGAGACTCAGTCCGCGCTCCAAGAT
 280 290 300 310 320 330 340
 CAGGACACGAAGGGCCTGTATTCCAGGCATTGGAGGCCGCCGATGTCTCAGCAAGAGCGTGGCC
 350 360 370 380 390 400 410
 CCCTTGCTAGCCCACGGCTACCGCCGCTTGTGCCCACCAAGGATCACGTCTCATTGACTACGTG
 420 430 440 450 460 470 480
 GGGACCCCTCTCTTCTCAAAAATGCCCTGGCTCCACCCCTGGCCAGATGCAGTGGAAAGGGCCTGT
 490 500 510 520 530 540 550
 CGCTATGTTGTTGTCGTGGAGCCAAGGATTTGCCCTGGACCCAAGGTGTGACACAGTTACCGT
 560 570 580 590 600 610 620
 AAATACCTCTACGTCTGGCCACTCGGGAGCCGCAGGAAGTGGTGGTACCAACCAAGCAGCCGGCCTGT
 630 640 650 660 670 680 690
 GACTGTGTGAGGTCTATCTGCAGTCAGTGGGAGGGGTCTTCAAGATGACATTCCACCACTCAATG
 700 710 720 730 740 750
 ACCTTCAGCAGATCGTGTGGTAGTGAATGAGACCCAGCAGGGCTCTACTGCTCCTCACAGGTTAGCTGGCC
 760 770 780 790 800 810 820
 AAGATCTACTCTTGGTAGTGAATGAGACCCAGCAGGGCTCTACTGCTCCTCACAGGTTAGCTGGCC
 830 840 850 860 870 880 890
 CTGAGGAAGGTGTCCCACCTGCCTCACCTGCGCTGGCTGCATGACTTCCAACCAGAGCAGCACC
 900 910 920 930 940 950
 CTCTACGTACAGATCCTATTCTGTGCTCTGGCTACAACCACCTGGCTGGTGGATGA

FIG. 19B

10 20 30 40 50 60
RGGSEGRGRGREKRARGARRRKQGGREARAADGEGGSGPGAEAGARTRPREEAEGGGSV

70 80 90 100 110 120
EEGARGIIKGDEGSVGAGKEAQGRKYGKEEWRVRARRREGARPGRVQGQGGQVWAYIPGT

130 140 150 160 170 180
GAAMAAAAREEEEEARESAACPAAGPALWRLPEVLLLHMCSYLDMRALGRLAQVYRWLW

190 200 210 220 230 240
HFTNC DLLRRQIAWASLNSGFTRLGTNLMTSVPVKVSQNIVGCCREGILLKWRCSQMPW

250 260 270 280 290 300
MQLEDDALYISQANFILAYQFRPDGASLNRQPLGVSA GHDEDVCHFVLATSHIVSAGGDG

310 320 330 340 350 360
KIGLGKIHSTFAAKYWAHEQE VNCVDCKGGIISFGSRDRTAKVWPLASGQLGQCLYTIQT

370 380 390 400 410 420
EDQIWSVAIRPLLSSFVTGTACCGHFSPLKIWDLNSGQLMTHLDRDFPPRAGVLDVIYES

430 440 450 460 470 480
PFALLSCGYDTYVRYWDCRTSVRKCVMEWEEPHNSTLYCLQTDGNHLLATGSSFYSVVR

490 500 510 520 530
WDRHQ RAC PHTFPLTSTR LGSPVYCLHLT KHYAALSYNLHVLDI QNP*

FIG. 20A

10 20 30 40 50 60 70 80 90
 CGAGGGGAAGCGAAGGAAGGGAAAGAGGAAGGGAAAAGCGAGCGAGAGGGCAAGCGAAGAGGAAGCAGGGCGGAAGGGAGCGGG
 100 110 120 130 140 150 160 170 180
 CACACGGGAAGGAGGCACGGGGGGGGCTGAGCGGGAGCGAGCACCGCCAAGAGAGGAAGCAGAGGGAGCGGAAGCGTGGAGGAAGG
 190 200 210 220 230 240 250 260 270 280
 CGCGAGAGGCATCATCAAGAGATGAGGGGACCGTAGGGGGGGAAAGCGCACAGGAAGAAAGTATCGGAAGGGAGGAATGGAGGGTCAGG
 290 300 310 320 330 340 350 360 370
 GCTAGGGGGGGAGGGCCCAGGGCGGAAGAGTACAAGGACAAGGAGGTAGGTGGCTACATCCCCGGACAGGGGGGCCATGGGG
 380 390 400 410 420 430 440 450 460 470
 CGGCACCCAGGGAGG
 480 490 500 510 520 530 540 550 560
 GCTTACATGTGCTCTACCTCGACATGGGGCCCTGGGGCCCTGGGGCCAGGTGTACCGCTGGCTCTGGCACTTCACCAACTGGACCTGCTC
 570 580 590 600 610 620 630 640 650
 CGGGCCAGATAGCTGGGCTGGCTCAACTGGGCTTCACCCGGCTCGGCACCAACCTGATGACAGTGTCCAGTGAAGGTGTCTCAGAACT
 660 670 680 690 700 710 720 730 740 750
 CGATAGTGGGTGCTGGGAGAGGGATTCTGCTGAAGTGGAGATCCAGTCAGATGGCTGGATGGCTAGAGGATGATGCTTGTACATATC
 760 770 780 790 800 810 820 830 840
 CCAGGCTAATTCATCTGGCTTACCAAGTCCAGATGGTCCAGCTGAACCGTCAGCCTCTGGAGTCTCTGCTGGCATGATGAGGAC
 850 860 870 880 890 900 910 920 930 940
 GTTTCGCACTTTGTGCTGGGACCTGGCATATTGTCAGTCAGGAGGAGATGGAAAGATTGGCTTGGTAAGATTACAGCACCTTGGCTGGCA
 950 960 970 980 990 1000 1010 1020 1030
 ACTACTGGGCTCATGAAACAGGAGGTGAACTGTGTGATTCCAAAGGGGCACTCATATCATTTGGCTCCAGGGACAGGAGGCCAAGGTGTGGC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTTCGGCTCAGGCCAGCTGGGGACTGTTATACACCATCCAGACTGAAGACCAAATCTGGCTCTGGCTATCAGGCCATTACTCAGCTCTTT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 GTGACAGGGACGGCTGTGTGGCACTTCTACCCCTGAAATCTGGCACCTCAACAGTGGCAGCTGATGACACACTTGGCACAGAGACTTTC
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 CCCCCAGGGCTGGGTGCTGGATGTATATATGACTGCCCCCTTCCGACTGCCTCTGTCAGCTGATGACACCTATGTTGGCTACTGGGACTGGCG
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 CACCACTGTCGGAAATGTCATGGACTGGAGGAGGCCAACACAGCACCCGTACTGCTGAGACAGATGCAACACTTGGCTTGGCAC
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 GGTTCCTCTCTATAGCGTTGTACCGCTGTGGAGGGGACCAAGGGCTGGGGCACACCTTCCCGCTGACGTCGACCCGCTGGCAC
 1510 1520 1530 1540 1550 1560 1570 1580 1590

FIG. 20B

10 20 30 40 50 60
LILTSVLLFQRHGYCTLGEAFNRLDFSSAIQDIRTFNYVVKLLQLIAKSQLTSLSGVAQK

70 80 90 100 110 120
NYFNILDKIVQKVLDHHNPRLIKDLLQDLSSSTLCILIRGVGKSVLVGNINIWICRLETI

130 140 150 160 170 180
LAWQQQLQDLQMTKQVNNGLTLSDLPLHMLNNILYRFSDGWDIITLGQVTPTLYMLSEDR

190 200 210 220 230 240
QLWKKLCQYHFAEKQFCRHLILSEKGHIEWKLMYFALQKHYPAKEQYGDTLHFCRHCSIL

250 260 270
FWKDGSHPCTAADPDSCFTPVSPQHFIDLFKF

FIG. 21A

10 20 30 40 50 60
 GCATTGCTATAATTTACTATACATCTCATCTAAATCTAAAATCAGTCTCAAAATAAAACAAATTGTC
 70 80 90 100 110 120 130
 CTTGCCAAAATTTTTAATCGACAATTGACATTACTGCCAATTCTTTGGCTAATTGAC
 140 150 160 170 180 190 200
 TAATTTAACCTCTGTGTTGCTTCCAGAGGCATGGCTATTGCACCTGGGAGAAGCCTTAATCGGT
 210 220 230 240 250 260 270
 TAGACTTCTCAAGTCAATTCAAGATATCCGAACGTTCAATTATGTGGTCAAACACTGTTGCAGCTAATTG
 280 290 300 310 320 330 340
 CAAAATCCCAGTTAACCTCATTGAGTGGCGTGGCACAGAAGAATTACTTCACACATTGGATAAAATCG
 350 360 370 380 390 400 410
 TTCAAAAGGTCTTGATGACCACCACAATCCTCGTTAACAAAGATCTCTGCAAGACCTAAGCTCTA
 420 430 440 450 460 470 480
 CCCCTCTGCATCTTATTAGAGGAGTAGGGAACTCTGTATTAGGGAAACATCAATATTGGATTGCG
 490 500 510 520 530 540 550
 GATTAGAAACTATTCTCCCTGGCAACAACAGCTACAGGATCTCAGATGACTAAGCAAGTGAACAATG
 560 570 580 590 600 610 620
 GCCTCACCCCTCAGTGACCTTCCTGCACATGCTGAACAACATCCTATACCGGTCTCAGACGGATGGG
 630 640 650 660 670 680 690
 ACATCATCACCTTAGGCCAGGTGACCCCCACGGTATATGCTTAGTGAAGACAGACAGCTGTGGAAGA
 700 710 720 730 740 750
 AGCTTTGTCAGTACCAATTGCTGAAAGCAGTTTGAGACATTGATCCTTCAGAAAAAGGTCA
 760 770 780 790 800 810 820
 TTGAATGGAAGTTGATGACTTGCACCTCAGAAACATTACCCAGCGAAGGAGCAGTACGGAGACACAC
 830 840 850 860 870 880 890
 TGCATTTCTGCGGCACTGCAGCATTCTCTTGGAGGACTCAGGACAQCCCTGCACGGCGGCCGACC
 900 910 920 930 940 950 960
 CTGACAGCTGCTTCACGCCGTGTCCTCCGAGCACTTCATCGACCTCTCAAGTTAAGGGCTGCC
 970 980 990 1000 1010 1020 1030
 TGCCATCCCTATTGGAGATTGTGAATCCTGCTGTGAGGGCTCATAGTGAGTGTCTGTGAGGTG
 1040 1050 1060 1070 1080 1090 1100
 GGTGGAGACTCCTCGGAAGCCCTGCTTCCAGAAAGCCTGGAGAACTGCCCTCTGCAAAGGGGG
 1110 1120 1130 1140 1150 1160 1170
 CTGCATGGTTGCATTTCACTGAAAGTCAGAGGCCAAGGAAATCATTCTACTCTTAAAC
 1180 1190 1200 1210

FIG. 21B

10 20 30 40 50 60
YGSEGKGSSSISSDVSSSTDHTPTKAQKNVATSESDLMSRTLSTPSPALICPPNLPGFQ

70 80 90 100 110 120
NGRGSSTSSSSITGETVAMVHSPPPTRLTHPLIRLASRPQKEQASIDRLPDHSMVQIFSF

130 140 150 160 170 180
LPTNQLCRCARVCRRWYNLAWDPRLWRTIRLTGETINVDRALKVLTRRLCQDTPNVCLML

190 200 210 220 230 240
ETVTVSGCRRLTDRGLYTIAQCCPELRRLEVSGCYNISNEAVFDVVSLCPNLEHLDVSGC

250 260 270 280 290 300
SKVTCISLTREASIKLSPLHGKQISIRYLDMDTDCFVLEDEGLHTIAAHCTQLTHLYLRRC

310 320 330 340 350 360
VRLTDEGLRYLVIYCASIKEVSDCRFVSDFGLREIAKLESRLRYLSIAHCGRVTDVGI

370 380 390 400 410 420
RYVAKYCSKLRYLNARGCEGITDHGVEYLAKNCTKLKSLDIGKCPLVSDTGLECLAINCF

430 440 450 460 470 480
NLKRLSLKSCESITGQGLQIVAANCFDLQTLNVQDCEVSVEALRFVKRHCKRCVIEHTNP

AFF

FIG. 22A

FIG. 22B

10 20 30 40 50 60
AAPAPAPAPPTPEEGPDAGWGDRIPLEILVQIFGLLVAADGPMPFLGRAARVCRRWQE

70 80 90 100 110 120
AASQPALWHTVTLSSPLVGRPAKGGVKAEKLLASLEWLMPNRFSQLQRLTLIHWKSQVH

130 140 150 160 170 180
PVLKLVGECCPRLTFLKLSGCHGVTADALVMLAKACCQLHSSDLQHSMVESTAVVSFLEE

190 200 210 220 230 240
AGSRMRKLWLTYSSQTTAILGALLGSCCPQLQVLEVSTGINRNSIPLQLPVEALQKGCPQ

250 260 270 280
LQVLRLLNLMWLPKPPGRGVAPGPGFPSLEELCLASSTCNFVS

FIG. 23A

10 20 30 40 50 60
 TGCGGCCGCGCCCGCACCCGACCGGCACCCACGCCACGCCGAGGAAGGGCCGACGCCGGCTGGGG
 70 80 90 100 110 120 130
 AGACCGCATCCCTTGGAAATCCTGGTGCAGATTTGGGTTGTTGGTGGCGGCCGACGGCCCCATGCC
 140 150 160 170 180 190 200
 CTTCCCTGGGCAGGGCTGCGCGCGTGTGCCGCCGCTGGCAGGAGGCCGCTTCCCAACCCGCCCTGGCA
 210 220 230 240 250 260 270
 CACCGTGACCCCTGTCGTCCCCGCTGGTGGCGGCCCTGCCAAGGGCGGGTCAAGGCAGAGAAGCT
 280 290 300 310 320 330 340
 CCTTGCTTCCCTGGAGTGGCTTATGCCAATCGGTTTACAGCTCCAGAGGCTGACCTCATCCACTG
 350 360 370 380 390 400 410
 GAAGTCTCAGGTACACCCCGTGTGAAGCTGGTAGGTGAGTGCTGCTCGGCTCACTTCCCTCAAGCT
 420 430 440 450 460 470 480
 CTCCGGCTGCCACGGTGTGACTGCTGACGCTCTGGTCATGCTAGCCAAAGCCTGCTGCCAGCTCCATAG
 490 500 510 520 530 540 550
 CCTGGACCTACAGCACTCCATGGTGGAGTCCACAGCTGGTGAGCTTGGAGGGCAGGGTCCG
 560 570 580 590 600 610 620
 AATGCGCAAGTTGGCTGACCTACAGCTCCCAGACGACGCCATCCTGGCGCATTGCTGGCAGCTG
 630 640 650 660 670 680 690
 CTGCCCCCAGCTCCAGGTCTGGAGGTGAGCACCGCATCAACCGTAATAGCATTCCCTCAGCTGCC
 700 710 720 730 740 750
 TGTCGAGGCTCTGCAGAAAGGCTGCCCTCAGCTCCAGGTGCTGCCGCTGTTGAAACCTGATGTGGCTGCC
 760 770 780 790 800 810 820
 CAAGCCTCCGGACGAGGGTGGCTCCGGACCAGGCTCCCTAGCCTAGAGGAGCTCTGCCGAG
 830 840 850
 CTCACCTGCAACTTGTGAGC

FIG. 23B

10	20	30	40	50	60
QHCSQKDTAELLRGLSLWNHAEERQKFFKYSVDEKSDKEAEVSEHSTGITHLPPEVMSI					
70	80	90	100	110	120
FSYLNQPQELCRCSQVSMKWSQLTKTGSLWKLYPVHWARGDWYSGPATELDTEPDDEWVK					
130	140	150	160	170	180
NRKDESRAFHEWDEDADIDESEESAEESIAISIAQMEKRLHGLIHNVLPYVGTSVKTLV					
190	200	210	220	230	240
LAYSSAVSSKMVRQILELCPNLEHLDLTQTDISDSAFDSWSWLGCCQSLRHLDLSGCEKI					
250	260	270	280	290	300
TDVALEKISRALKILTSHQSGFLKTSTSKitSTAWKNKDITMQSTKQYACLHDLTNKGIG					
310	320	330	340	350	360
EEIDNEHPWTKPVSSENFTSPYVWMLDAEDLADIEDTVEWRHRNVESLCVMETASNFSCS					
370	380	390	400	410	420
TSGCFSKDIVGLRTSVCWQQHCASPAFAYCGHSFCCTGTALRTMSSLPESSAMCRKAART					
430	440	450	460	470	480
RLPRGKDLYFGSEKSDQETGRVLLFLSLSGCYQITDHGLRVLTLGGGLPYLEHNLNSGC					
490	500	510	520	530	540
LTITGAGLQDLVSACPSLNDEYFYCDNINGPHADTASGCQNLQCGFRACCRSGE*PLTS					
550	560	570	580	590	
DLCLLHLAEQAFFHALYS*HISCVNHPFLSVTCFGPIXYNFRNLNYQXIVML					

FIG. 24A

10 20 30 40 50 60 70 80 90
 ACAACACTGCTCTCAGAAGGATACTCCAGAACTCTTAGAGGTCTTACGCCATGGAACTGCTGAAGAGGGACAGAARTTTTAATTATTCC
 100 110 120 130 140 150 160 170 180
 GTGAGTAAAAGTCAGATAAAAGAAGCAGAAGTGTCAAGAACACTCCACAGGTATAACCCATCTTCCCTCAGCTAATCTCTCAATTTCAGCT
 190 200 210 220 230 240 250 260 270 280
 ATCTTAATCCTCAAGAGTTATGCGATGCACTGAAGTAACCATGAAATGGCTCAGCTGACAAAAACGGGATGCCCTTGGARACATCTTACCC
 290 300 310 320 330 340 350 360 370
 TCTTCATTGGGCCAGAGGTGACGTGCTATAGTGGTCCCGCACTGAACCTGACTGAACCTGATGATGAAATGGGTGAAAAATAGGAAGATGAA
 380 390 400 410 420 430 440 450 460 470
 AGTCGTCTTTTCATGAGTGGATGAAGATCCTGACATTGATGAAGAGTCTGCGGAGGAATCAATTGCTATCAGCATTGCCACAAATGG
 480 490 500 510 520 530 540 550 560
 AAAAACCTTTACTCCATGGCTTAATTCTACACGTTCTACCATATGTTGGTACTTCTGTAAAAACCTTACTGATTTAGCATAACGGCTCTGCAGTTTC
 570 580 590 600 610 620 630 640 650
 CACGAAATCGTTACCCAGATTAGACCTTGTCTTAACCTGGACATCTGGATCTTACCCAGACTGACATTTGAGATTCTGCATTGACAGT
 660 670 680 690 700 710 720 730 740 750
 TCGTCTTGGCTTGGTCTGCCAGAGTCTTCCGCATCTTGTGATCTGCTGGTGTGAGAAAATCACAGATGTCGCCCTAGAGAAGATTTCCAGAG
 760 770 780 790 800 810 820 830 840
 CTCTTCCGAAATTCTGACATCTCATCAAACGCTTTTGAACATCTACAAACGAAATTACTTCAACTCGTGGAAAATAAGACATTACCAT
 850 860 870 880 890 900 910 920 930 940
 CGAGTCCACCAAGCAGTATCCCTGTTCCACGATTTAACTAACAAAGGGATTGGAGAAGAAAATAGATAATGAAACACCCCTGGACTAACCTGTT
 950 960 970 980 990 1000 1010 1020 1030
 TCTCTGAGAATTTCACCTCTCTTATGTTGGATGTTAGATGCTGAAGATTGCTGATATTGAGATACTGTTGAATGGAGACATAGAAAATG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTGAAAGCTTTGCTTAATGCAAACAGCATCCAACCTTACTGTTGCTCCACCTCTGTTTGTAGTAAGGACATTGTTGGACTAACGGACTAGTG
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CTGTTGGCACCACGCTTGTGCTTCCAGCCTTGGTATGCGTCACTCATTTGTTGACAGAACACCTTAAAGAACATGTCATCACTC
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 CCAGAATCTCTGAAATGTTAGAAAAGCAGCAAGGACTAGATGCTTAGGGAAAAGACTTAATTACTTGGACTGAAAATCTGATCAAG
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 AGACTGGACCTGTAATTCTCTGTTCTCAGTTATGCGATGTTACAGATCACAGACCATGGTCTCAGGGTTTGACTCTGGGAGGAGGCCG
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTATTTGGAGCACCTTAATCTCTGTTCTTACTATAACTGTTGAGGCCCTCAGGATTTGCTTACGGATGTTGAGCTGCTTCTGAAATGATGAA
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 TACTTTACTACTGACAACATTAACGGTCTCATGCTGATACGCCAGTGGATCCCAGAATTGCGACTGCTGGTTTGGAGCTGCTCCCGCT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 CTGGCGAATGACCCCTGACTCTGATCTTCTACTTACCTTACGGTCACTGAGCAGGCTTCTTACGACTTAACTCATAGCACATTCTGTTG
 1700 1710 1720 1730 1740 1750 1760 1770
 TAACCATCCCTTTGAGCGTCACTGTTGGCCCATNNYTTACAACCTCAGAAATCTTAATTACCACTGTTGAAATGTTG

FIG. 24B

10	20	30	40	50	60
RVTSAGCGLARGSSAMVFSNNDEGLINKKLPKELLRLIFSFLDIVTLRCRAQISKAWNILA					
70	80	90	100	110	120
LDGSNWQRIDLNFQIDVEGRVVENISKRCVGFLRKLSLRGCIGVGDSSLKTFAQNCRNI					
130	140	150	160	170	180
EHLNLNGCTKITDSTCYSLSRFCSKLKHLXLTSCVSITNSSLKGISEGCRNLEYLNLSWC					
190	200	210	220	230	240
DQITKDGIEALVRGCRLKALLRGCTQLEDEALKHIQNYCHELVSLNLQSCSRITDEGV					
250	260	270	280	290	300
VQICRGCHRLQALCLSGCSNLTDASLTALGLNCPRLQILEAARCSHLDAGFTLLARNCH					
310	320	330	340	350	360
ELEKMDLEXCILITDSTLIQLSIHCPKLQALSLSHCEIXDDGILHLSNSTCGHERLRLV					
370	380	390	400	410	420
ELDNCLLITDVALXHLENCRGLERLELYDCQQVTRAGIKRMRAQLPHVKVHAYFAPVTPP					
430	440	450	460	470	480
TAVAGSGQRLCRCCVIL*QQLPGPKG**GILSSRRPESS*PTPPSPNLILHWERHLQFP					
490	500	510	520	530	540
NRHLSRFKNGEDKKGFISNI*HHIVT*NMALT*LVLLLPSSLMSSLTSTHLLL*YL*RLI					
550					
ILKTDQTGPASKYINCVQ*					

FIG. 25A

10 20 30 40 50 60 70 80 90
 TTTTACTGTACACAGTTGATGTTGATGCTGGGCCCTGCTCTGGCTTGGAGGATTAAACCTTTAGAGGTATCAGAGAAGCAAATGGG
 100 110 120 130 140 150 160 170 180
 TACTGGTGAGGCTGCTCATTAGGGAAAGAGGGCAAAAGGACCACTAGCTAGGTAGGCCATGTTTCAAGGTACAAATGTGATGTCAGATGTTGCT
 190 200 210 220 230 240 250 260 270 280
 TATAAAATCCTTCTTGTCTTGGCATTCTTAAATCTTGATAGGTGCTGTTGGAAACTGTAAATGCCCTTCCCAATGGAGAATCAACAGATTG
 290 300 310 320 330 340 350 360 370
 GGTGATGGTGGAGTCGGTCAGGAAGACTCAGGTCTCTAGAGGAAGGGATGCCATCACCCCTTNGGCCAGGGCTGCTGTCAGAGAATGA
 380 390 400 410 420 430 440 450 460 470
 CACACCACTGACAGTGGCTGTCACACTTCTGCCACTGCTGCGTGGGGTGACGGGAGCAAAGTAGGGCTGGACTTTGACATCAGGGAGCTG
 480 490 500 510 520 530 540 550 560
 AGCCCCGATCCCGCTTCACTGCTCCACGGGTAACTGCTGGCAGTCGTACAGCTCGAGGGCGCTCCAGGGCTCGGCCAGTCTCTAGGTGTYCCAGG
 570 580 590 600 610 620 630 640 650
 CCCACATCAGTCATGAGGAGGCAGTTGTCACACTCCAGTACCCCCAGCCCTCTCATGGCCACAGGTACTGTTGCTCAGGTGCAAGGATCCCACATCAT
 660 670 680 690 700 710 720 730 740 750
 CTGKGATGAGTTACAGTGGACAGGCTCAGGGCTTGCAGTTAGGACAGTGAATGGAGAGCTGGATGAGTGTGCTCGGTTACAGGATGCA
 760 770 780 790 800 810 820 830 840
 WTCTTCAGATCCATCTCTCAATTCTGTCAGTAAAGTGTAAAACCTGCGTCAGTCAAATGGGAGCATGGGAGCTCCAAA
 850 860 870 880 890 900 910 920 930 940
 ATTTGCAGTCGGGACAGTTCAAAACCCAGGGCTGTAAGACAGCCATCTGTGAGGTTGCTGCAACCCGAAAGCCAGAGGAGGCTGTAGCCGGTCAC
 950 960 970 980 990 1000 1010 1020 1030
 AGCCCCCTGCAATCTGACCCACACCTCATCCGTATACGTCAGCAGGACTGCAAGTTGAGGCTACAAAGCTCATGGCAGTAATTCTGAATGTG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTTCAGAGCTTCATCTCTAACTGTGTCAGGACAGGGCTTCAGGACAGGGCTTCAGGCCCTCGACAAACCTCCACAGTGCCTCGATGCCATCCTTC
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CTGATCTGATCACACCAAGAGAGGTTAGTACTCAGGTTCCGGCAGGCCCTACAGTACCCCTCAAGGAGCTCTTGTAAATAGACACACAGG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 AGGTCAAGCCAGATGTTAGCTTGGAAACAGAACTCGCTAAGGCTATAACACGTGCTGTCAGTGAATTGTCATCCATTGAGGTTCAAAAG
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 TTCAATGTTTGGCAGTTCTGTCAAAGGTCTTCAAGGAGGAATCCAAACCCAATGCCAGGCTCCAAAGGTGAGCTTCCCTCAGGAATCCAAAC
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 CATCGCTTCGGAGATATTTCCACCACTCGACGCCCTACATCTATTGAAAGTAAATCTTTCAGGCTTGGCTTCATCCAGGGCTA
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 AGATGTTCCAAGGCTTGGAAATCTGTCACATGCCACAAAGTTACTATATCCAAGAAGGAAATATTCTTAACAGAAGTTCTTGGGTAACCTT
 1600 1610 1620 1630 1640 1650 1660 1670 1680
 TTGTTAATAAGGCCCTCATCATGTTGAGAAAACATGGCGAAGAGCCGCGAGCGAGCCACAGCCGAAGTCACACGGC

FIG. 25B

10	20	30	40	50	60
MSPVFPMLTVLTMFYIICLRRARTATRGEMMNTHRAIESNSQTSPNNAEVVQYAKEVVD					
70	80	90	100	110	120
FSSHYGSENSMSYTMWNLAGVPNVFPSSGDFQTAVFRTYGTWWDQCPSASLPFKRTPPN					
130	140	150	160	170	180
FQSQDÝVELTPEQQVYPTAVHVLETÝHPGAVIRILACSANPYPSPNPPAEVRWEILWSERP					
190	200	210	220	230	240
TKVNASQARQFKPCIKQINFPTNLIRLEVNSSLLEYYTTELDAVVLHGVKDKPVLSLKTS					
250	260	270	280	290	300
IDMNDIEDDAYAEKDGCMDLSNKKFSSAVLGEGPNNNGYFDKLPYELIQLILNHHTLPDL					
310	320	330	340	350	360
CRLAQTCKLLSQHCCDPLQYIHLNLQPYWAKLDDTSLEFLQSRCTLVQWLNLSWTGNRGF					
370	380	390	400	410	420
ISVAGFSRFLKVCGSELVRLELSCSHFLNETCLEVISEMCPNLQALNLSSCDKLPPQAFN					
430	440	450	460	470	480
HIAKLCSSLKRLVLYRTKVEQTALLSILNFCSELQHLSLGSCVMIEDYDVIASMIGAKCKK					
490	500	510	520	530	540
LRTLDLWRCKNITENGIAELASGCPLLEELDLGWCPTLQSSTGCFTRLAHQLPNLQKLFL					
550	560	570	580	590	600
TANRSVCDTDIDELACNCTRLQQLDILGTRMSPASLRKLLESCKDLSLLDVSFCSQIDN					
610	620				
RAVLELNASFPKVFIKKSFTQ					

FIG. 26A

10 20 30 40 50 60 70 80 90
 ATGTCACCGGTCTTCCCATGTTAACAGTTGACCATGTTATTATATATGCTTCGGCGCCGACGGACAGCTACAAGAGGAGAAATGA
 100 110 120 130 140 150 160 170 180
 TCAACACCCATAGACCTATAAGAACATCAACAGCAGACTTCCCTCTCAATCAGAGGTAGTCCAGTATGCCAAGAAGTAGTGGATTCACTTC
 190 200 210 220 230 240 250 260 270 280
 CCATTATGGAAGTGAGAATAGTATGCTCTATACTATGCGAATTGGCTGGTACCAAAATGTATTCCAAGTCTGGTACTTACTCAGACA
 290 300 310 320 330 340 350 360 370
 GCTGTGTTTCAACTTATGGGACATGGTGGGATCAGTCTCTAGTCTTCCTGCCATCAAGAGGACGCCACCTAATTTCAGACCCAGGACT
 380 390 400 410 420 430 440 450 460 470
 ATGTGGAACCTACTTTGAACACAGGTGTACCTACAGCTGTACATGTCTAGAAAACCTATCATCCGGAGCAGTCATTAGAATTCTCGCTTG
 480 490 500 510 520 530 540 550 560
 TTCTGCAAAATCTTATTCCCAAAATCCACCAAGCTGAAGTAAGATGGAGATTCTTGGTCAGAGAGACCTACGAAGGTGAATGCTCCCAAGCT
 570 580 590 600 610 620 630 640 650
 CCCAGTTAACCTGTATTAAGCAGATAATTCTCCCAAAATCTTACAGACTGCAAGTAATAGTTCTCTCTGGAAATTACACTGAAT
 660 670 680 690 700 710 720 730 740 750
 TACATGCACTTGTGCTACATGGTGTGAAGGACAAGCCAGTCTCTCTCAAGACTTCACTTATTGACATGAATGATAGAAGATGATGCCA
 760 770 780 790 800 810 820 830 840
 TCCAGAAAAGATGGTTGCAATGGACAGTCTAACAAAAGTTAGCAGTCTCTCTGGGGAAAGGGCAAATAATGGGTATTCTGATAAA
 850 860 870 880 890 900 910 920 930 940
 CTACCTTATGAGCTTATTCACTGAGCTTCTGAATCATCTTACACTACCAGACCTGTGTAGATTAGCACAGACTTGCAAAACTACTGAGCCACCTT
 950 960 970 980 990 1000 1010 1020 1030
 CCTGTGATCCTCTGCAATACATCCACCTCAATCTGCAACCATACTGGCAAACCTAGATGACACTTCTGGAAATTCTACAGTCTCGCTGCCAC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TCTTGTCCACTGGCTTAATTATCTTGGACTGCGAATAGAGGCTTCATCTCTGGCAGGATTAGCAGGTTCTGAAGGTTTGTGGATCCGAA
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TTAGTACCCCTTGAATTGCTTCCAGCCACTTTCTTAATGAAACTTGTCTAGAAGTTATTCTGAGATGTGCTAAATCTACAGGCCTTAAATC
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 TCTCTCTGTGATAAGCTACCAACCTCAAGCTTCAACCACATTGCAAGTTATCCACCCCTAAACGACTTCTCTATCGAACAAAAGTAGA
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 GCAAAACAGCACTGCTCAGCATTGAACTTCTGTCAGACGCTTCAGCACCTCAGTTAGGCAGTTGTGTATGAGACTATGATGTGATA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 GCTACCATGATAGGAGCCAAGTGTAAAAAAACTCCGGACCCCTGGATCTGTGGAGATGTAAGAATATTACTGAGAATGGAATAGCAGAACCTGGCTT
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 CTGGGTGTOACTACTGGAGGAGCTGACCTTGGCTGGTCCCACACTCTGAGAGCAGCACCCGGTGCTTACCCAGACTGGCACACCAAGCTCCC
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 AAACCTTGCAAAACTCTTCTACAGCTAACAGATCTGTGTGACACAGACATTGATGAATTGGCATGTAATTGTACCGGTTACACCGAGCTG
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 GACATATTAGGAACAAGAACATGTAAGTCCGGCATCTTAAGAAAACCTCTGCAATCTGTGAAAGATCTTCTTACTTGATGTGCTTCTGTT
 1790 1800 1810 1820 1830 1840 1850 1860
 CGCAGATTGATAAACAGAGCTGTGCTAGAACCTGAATGCAAGCTTCCAAAAGTGTCTATAAAAAGAGCTTACTCAGTGA

FIG. 26B

10	20	30	40	50	60
MQLVPDIEFKITYTRSPDGDGVGNSYIEDNDDDSKMA DLLSYFQQQLTFQESVLKLCQPE					
70	80	90	100	110	120
LESSQI HISVLPMEVLMYIFRWVVSSDLRLSLEQLSLVCRGFYICARDPEIWRLACLKV					
130	140	150	160	170	180
WGRSCI KLV PYTSWREMFLERPRVRFDGVYISKTTYIRQGEQSLDGFYRAWHQVEYYRYI					
190	200	210	220	230	240
RFFPDGHVMM LTTPEEPQSIVPRLRTRNRTDAILLGHYRLSQD TDNQTKVFAVITKKKE					
250	260	270	280	290	300
EKPLDYKYRYFRRVPVQEADQSFHVGLQLCSSGHQRFNKL IWIHHSCHITYKSTGETAVS					
310	320				
AFEIDKMYTPLFFARVRSYTAFSERPL					

FIG. 27A

10 20 30 40 50 60
 ATGCAACTTGTACCTGATATAGAGTTCAAGATTACTTATACCCGGTCTCCAGATGGTATGGCGTTGGA
 70 80 90 100 110 120 130
 AACAGCTACATTGAAGATAATGATGATGACAGCAAAATGGCAGATCTCTTGTCTACTTCCAGCAGCAA
 140 150 160 170 180 190 200
 CTCACATTCAGGAGTCTGTGCTAAACTGTGTCAGCCTGAGCTTGAGAGCAGTCAGATTACATATCA
 210 220 230 240 250 260 270
 GTGCTGCCAATGGAGGTCTGATGTACATCTCCGATGGGTGGTGTAGTGAATTGGACCTCAGATCA
 280 290 300 310 320 330 340
 TTGGAGCAGTTGTCGCTGGTGTGCAGAGGATTCTACATCTGTGCCAGAGACCCCTGAAATATGGCGTCTG
 350 360 370 380 390 400 410
 GCCTGCTTGAAGTTGGGGCAGAAGCTGTATTAAACTGTGTTCCGTACACGTCTGGAGAGAGATGTTT
 420 430 440 450 460 470 480
 TTAGAACGGCCTCGTTCGGTTGATGGCGTGTATACAGTAAACACATATATTCTGTCAGGGAA
 490 500 510 520 530 540 550
 CAGTCTCTTGTGATGGTTCTATAGAGCCTGGCACCAAGTGAATATTACAGGTACATAAGATTCTTCCT
 560 570 580 590 600 610 620
 GATGGCCATGTGATGATGTTGACAACCCCTGAAGAGCCTCAGTCCATTGTTCCACGTTAAGAACTAGG
 630 640 650 660 670 680 690
 AATAACCAGGACTGATGCAATTCTACTGGGTCACTATCGCTTGTACAAGACACAGACAATCAGACAAA
 700 710 720 730 740 750
 GTATTTGCTGTAAATAACTAAGAAAAAAGAAGAAAAACCACTTGACTATAAATACAGATATTCGTCGT
 760 770 780 790 800 810 820
 GTCCCTGTACAAGAACGAGATCAGAGTTTCATGTGGGGCTACAGCTATGTTCCAGTGGTCACCAGAGG
 830 840 850 860 870 880 890
 TTCAACAAACTCATCTGGATACATCATTCTTGTACATTACTTACAAATCAACTGGTGAGACTGCAGTC
 900 910 920 930 940 950 960
 AGTGCTTTGAGATTGACAAGATGTACACCCCTTGTCTCGCCAGAGTAAGGAGCTACACAGCTTC
 970 980
 TCAGAAAGGCCTCTGTAG

FIG. 27B

10 20 30 40 50 60
AALDPDLENDFFVRKTGAFHANPYVLRAFEDFRKFSEQDDSVERDIILQCREGELVLPD

70 80 90 100 110 120
LEKDDMIVRRIPPAQKKEVPLSGAPDRYHPVPFPEPWTLPEIQAFLCVLERTCPSKEKS

130 140 150 160 170 180
NSCRILVPSYRQKKDDMLTRKIQSWKLGTTVPPISFTPGLCSEADLKRWEAIREASRLRH

190 200 210 220 230 240
KKRLMVERLFQKIYGENGSKMSDVSaedVQNLRQLRYEEMQKIKSQLKEQDQKWQDDLA

250
KWKDRRKSYTSDLQK

FIG. 28A

10 20 30 40 50 60
 GCAGCCCTGGATCCTGACTTAGAGAATGATGATTCCTTCAGAAAGACTGGGGCTTCATGCAAAT
 70 80 90 100 110 120 130
 CCATATGTTCTCCGAGCTTGAAGACTTAGAAAGTTCTGAGCAAGATGATTCTGTAGAGCGAGAT
 140 150 160 170 180 190 200
 ATAATTTACAGTGTAGAGAAGGTGAACCTGTACTTCCGGATTTGGAAAAAGATGATATGATTGTCGC
 210 220 230 240 250 260 270
 CGAATCCCAGCACAGAAGAAGAAGTGCCTGCTGGGGCCCCAGATAGATACCAACCCAGTCCCTTT
 280 290 300 310 320 330 340
 CCCGAACCTGGACTCTCCTCCAGAAATTCAAGCAAATTCTCTGTACTTGAAAGGACATGCCA
 350 360 370 380 390 400 410
 TCCAAAGAAAAAGTAATAGCTGTAGAATATTAGTTCCATATCGGCAGAAGAAAGATGACATGCTG
 420 430 440 450 460 470 480
 ACACGTAAGATTCACTGGAAACTGGAACTACCGTGCCTCCATCAGTTCACNCCTGGCCCTGC
 490 500 510 520 530 540 550
 AGTGAGGCTGACTTGAAGAGATGGGAGGCCATCCGGAGGCCAGCAGACTCAGGCACAAGAAAAGGCTG
 560 570 580 590 600 610 620
 ATGGTGGAGAGACTCTTCAAAAGATTATGGTGAGAATGGGAGTAAGTCATGAGTGTAGCGCA
 630 640 650 660 670 680 690
 GAAGATGTTCAAAACTTGCCTCAGCTGCCTACGAGGAGATGCAGAAAATAAAATCACAAATTAAAAGAA
 700 710 720 730 740 750
 CAAGATCAGAAATGGCAGGATGACCTTGCAAAATGGAAAGATCGTCGAAAAGTTACACTTCAGATCTG
 760
 CAGAAG

FIG. 28B

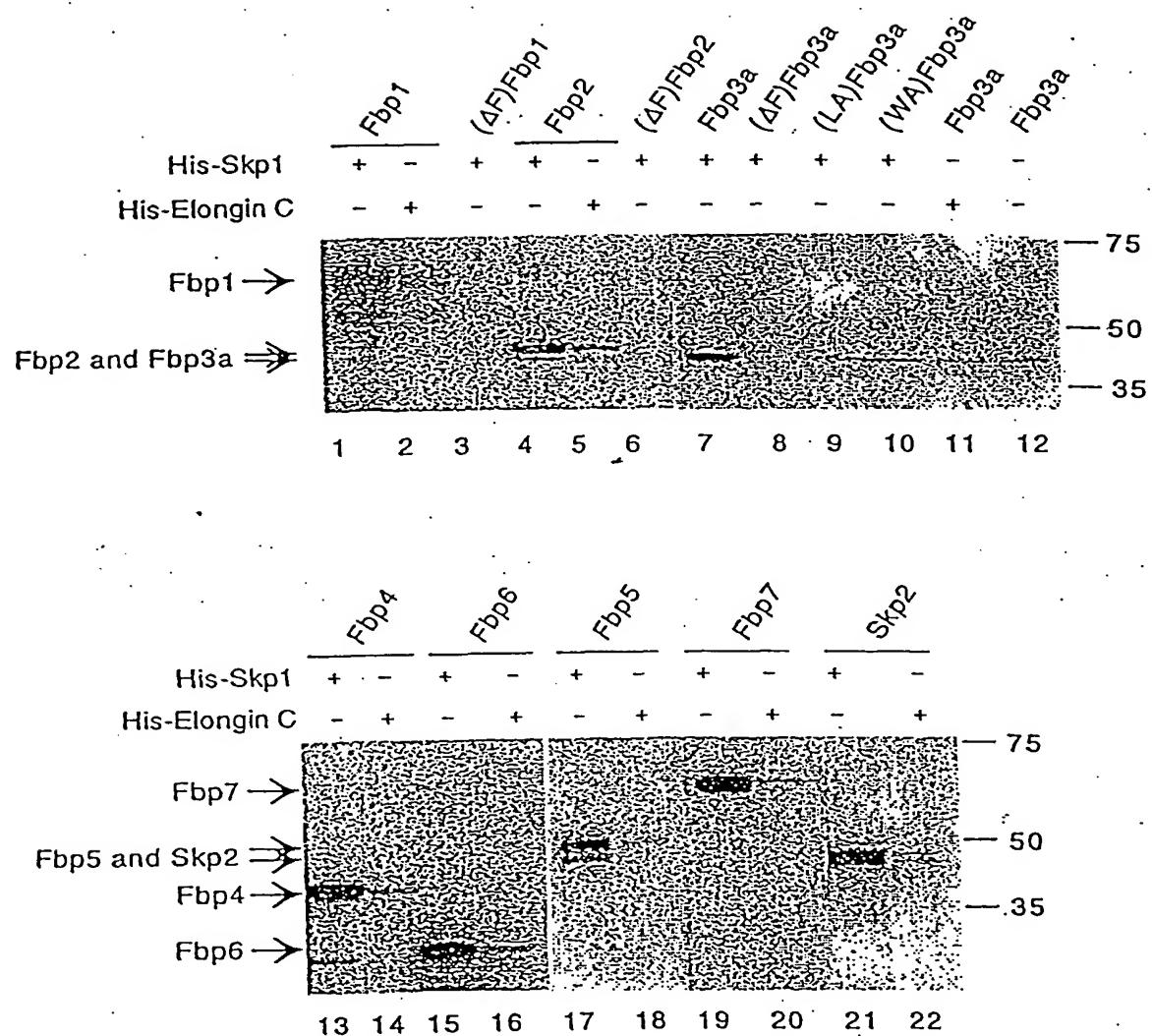


FIG. 29

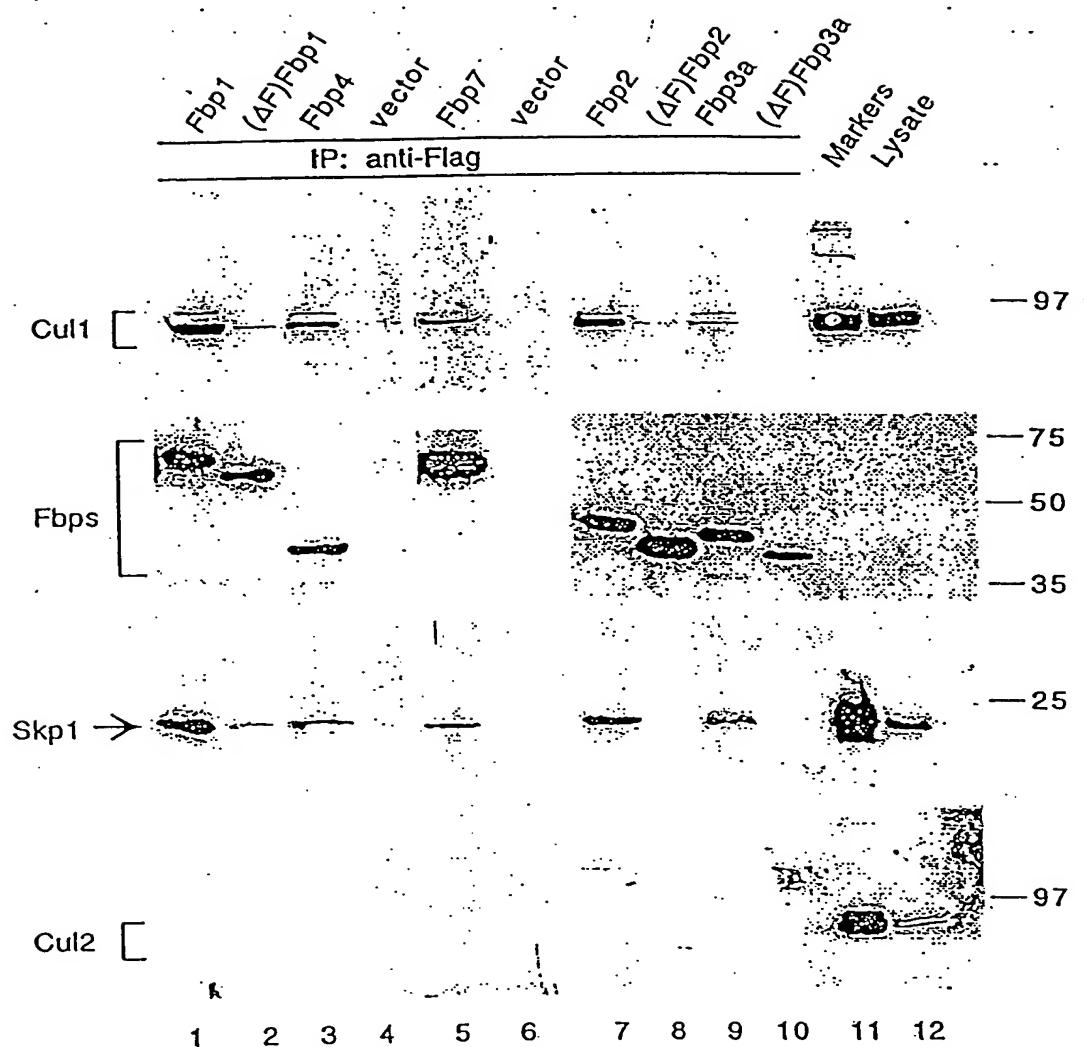


FIG. 30

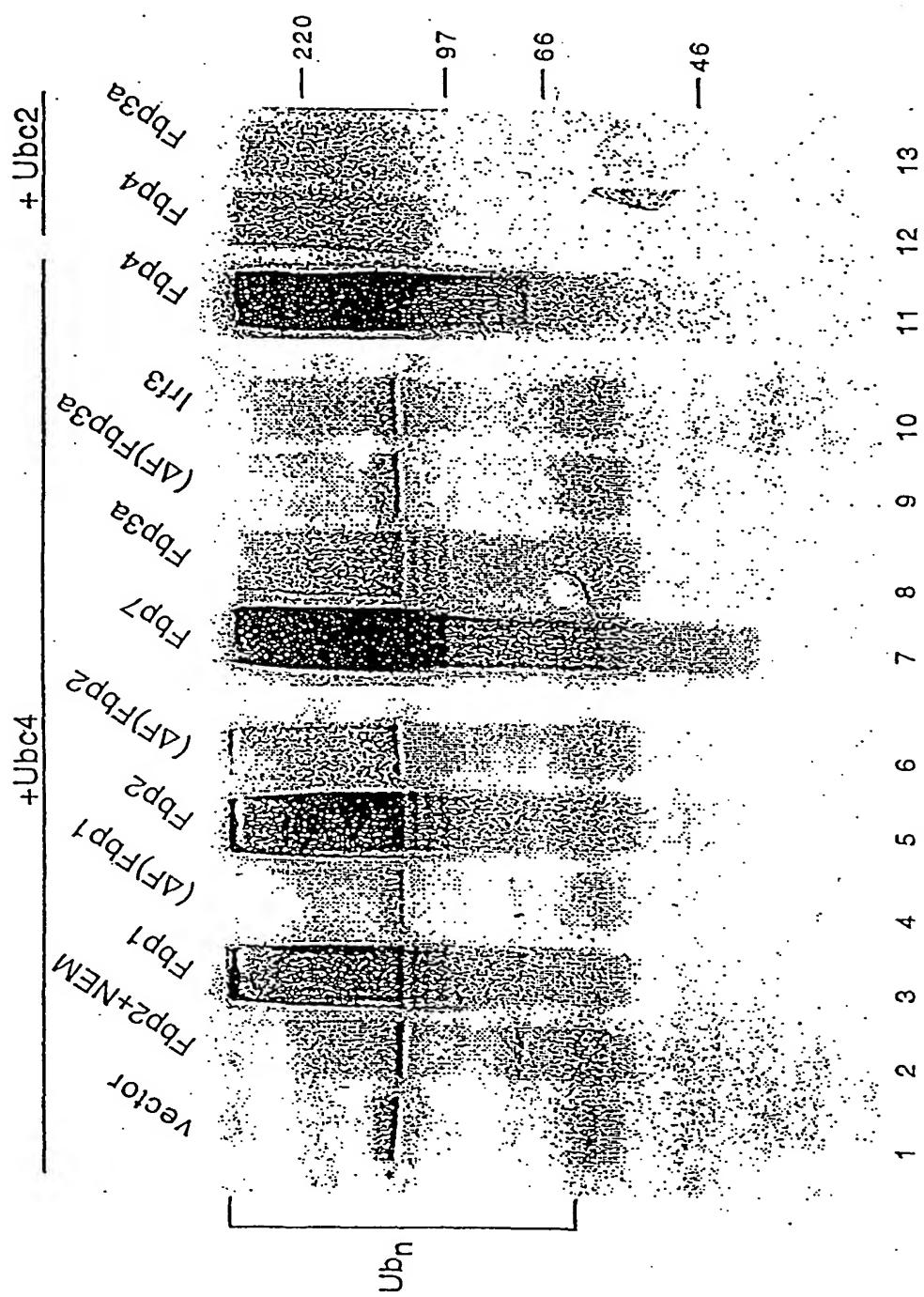


FIG. 31

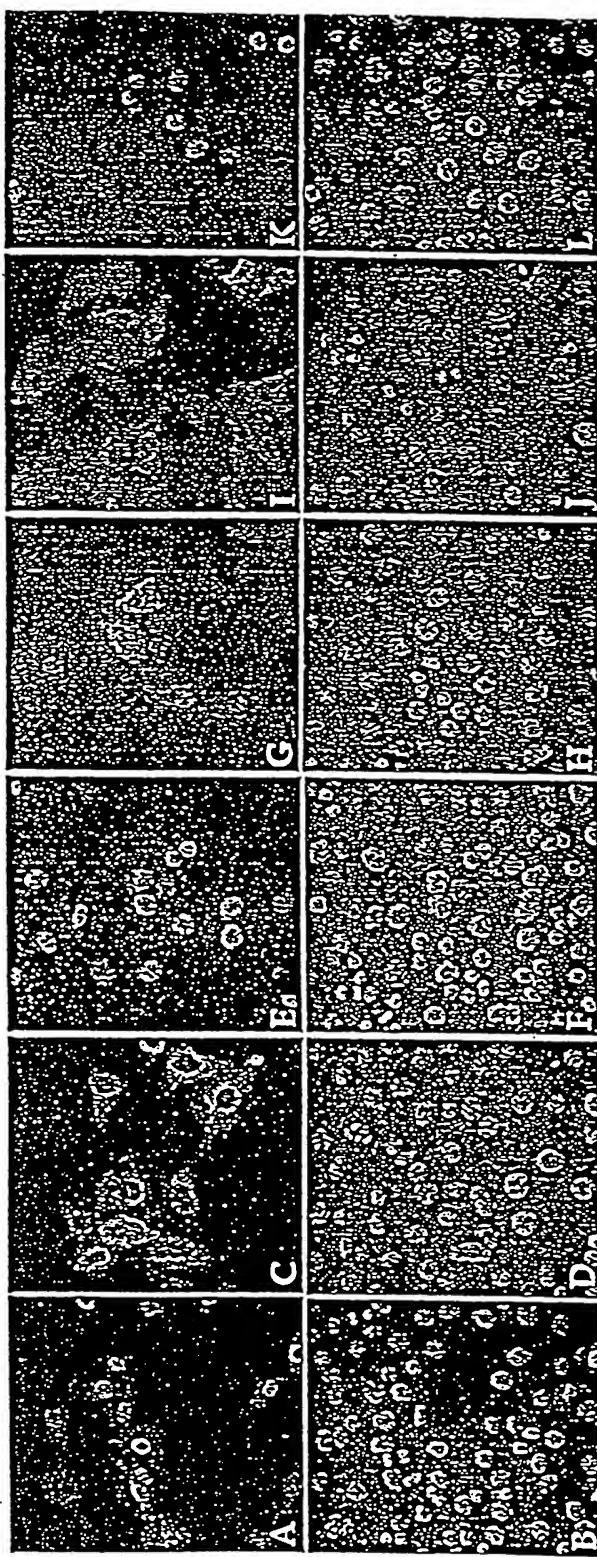


FIG. 32

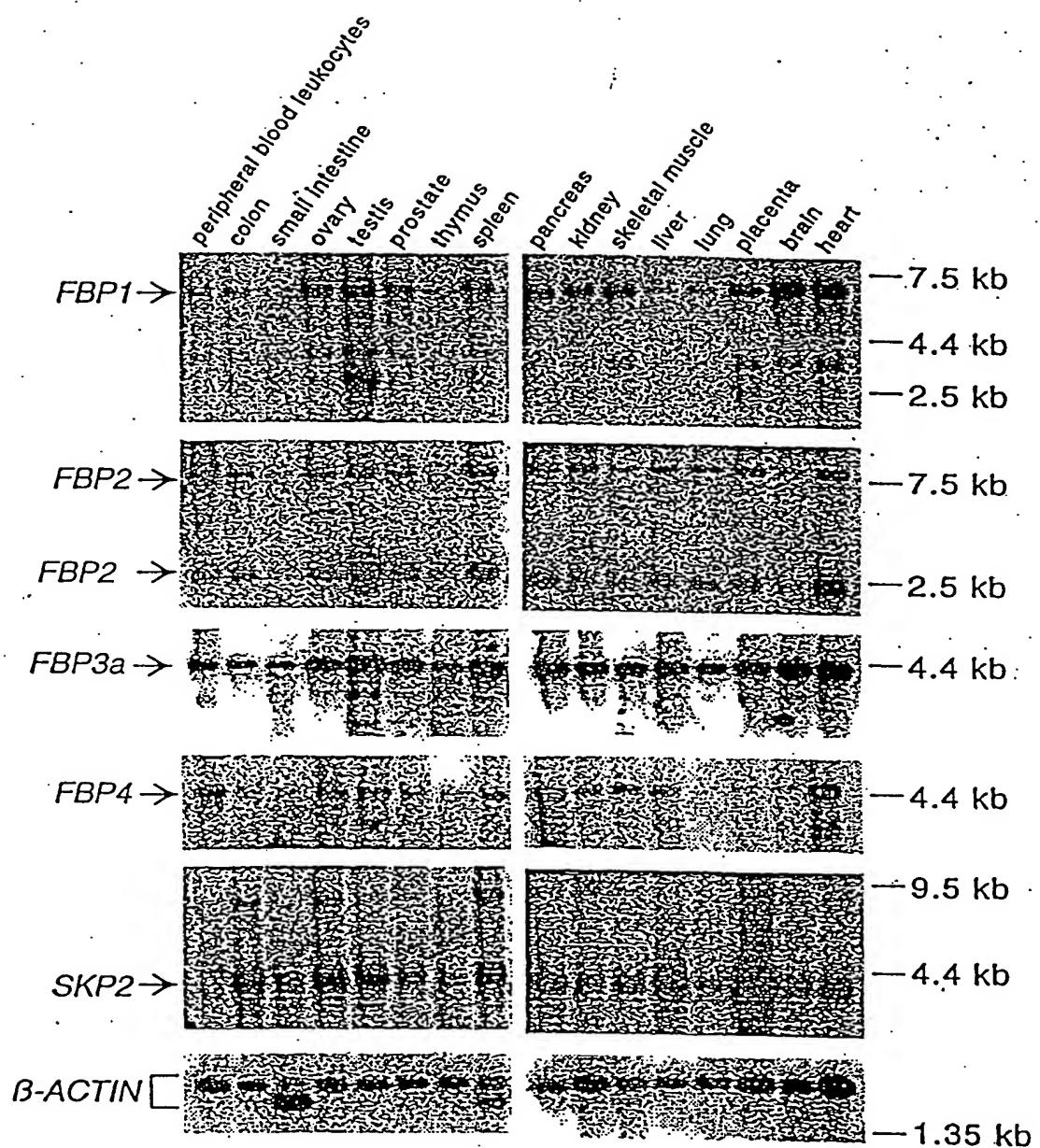


FIG. 33

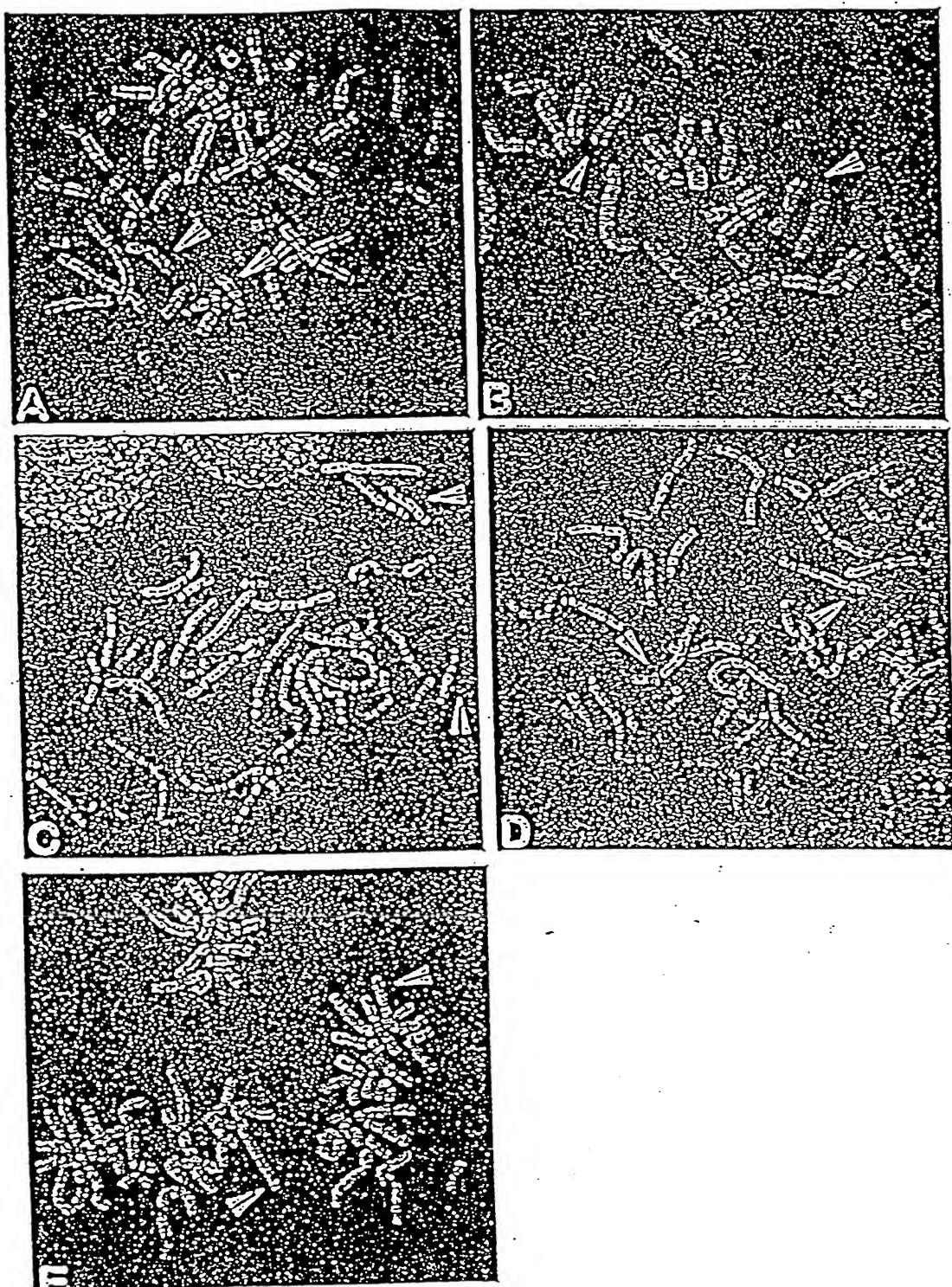


FIG. 34 A-E

5914-099

(Sheet 61 of 93)

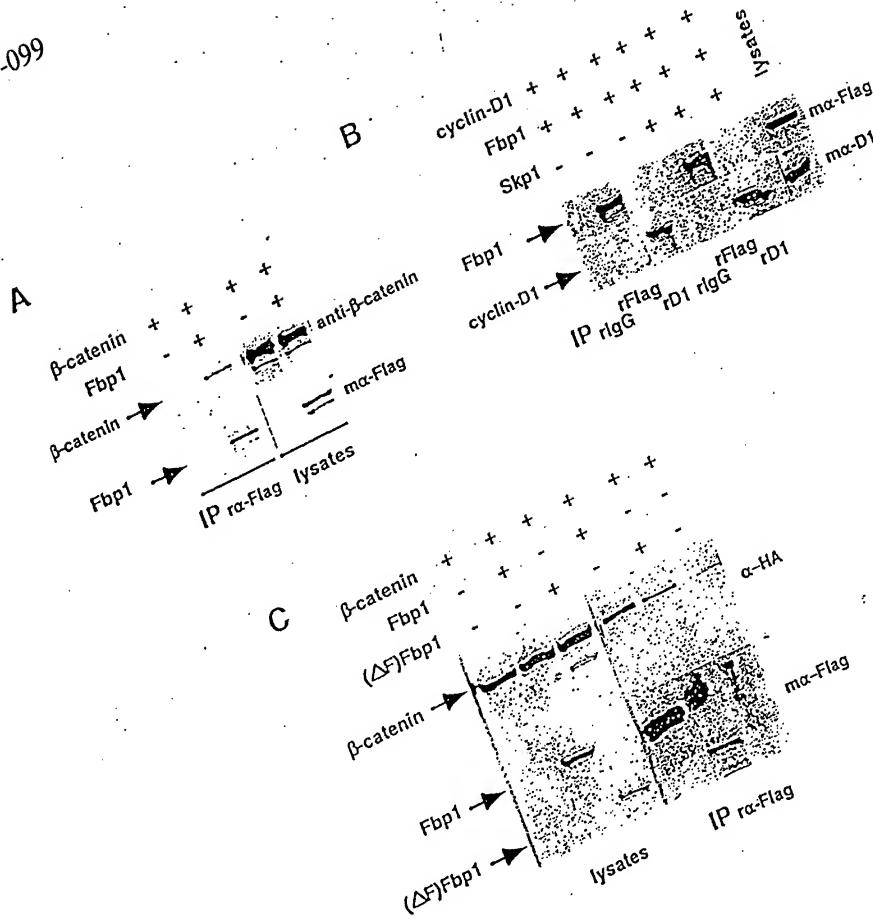


FIG. 35 A-C

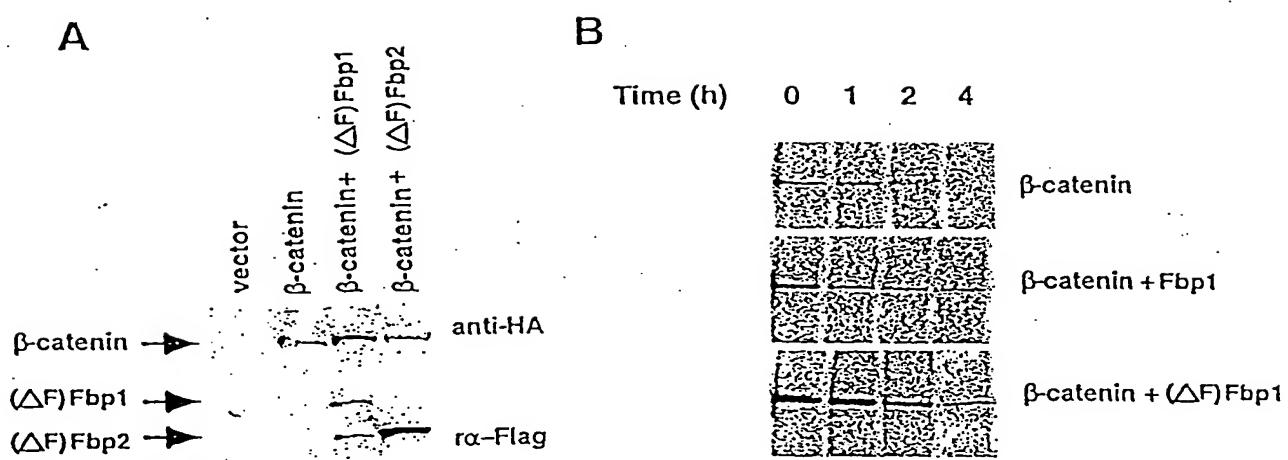


FIG. 36 A-B

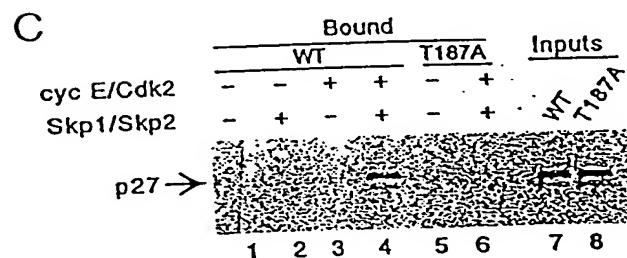
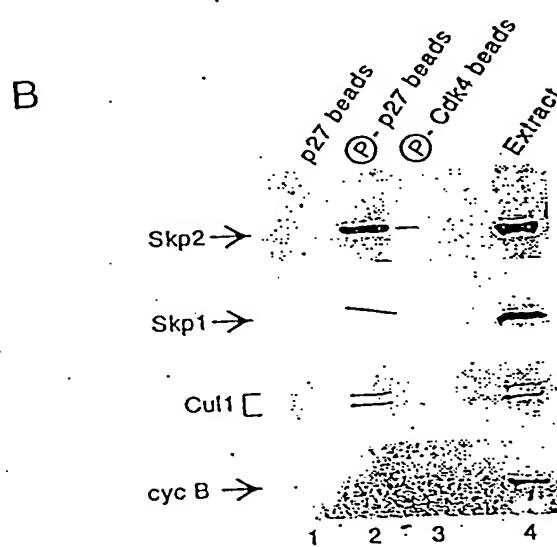
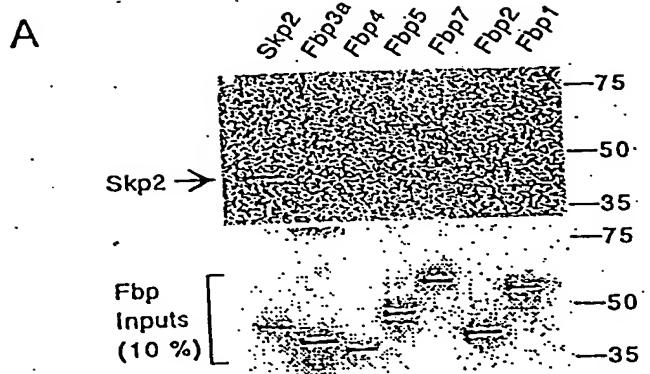


FIG. 37 A-C

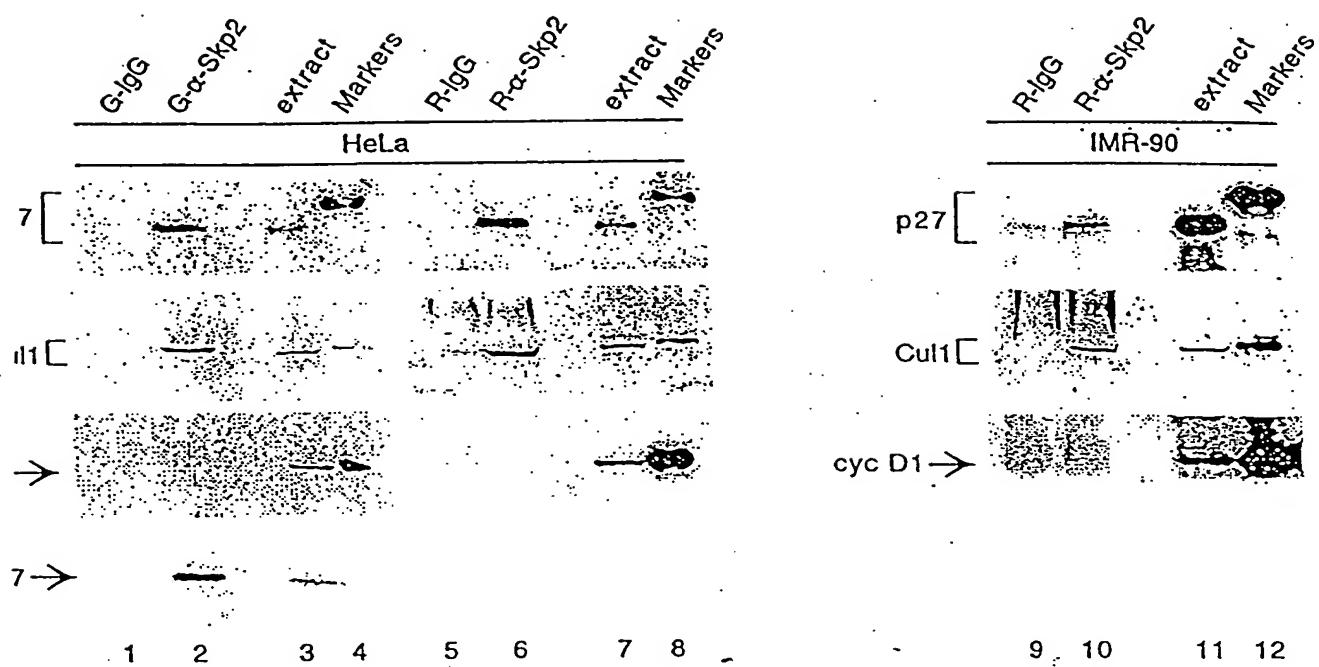


FIG. 38

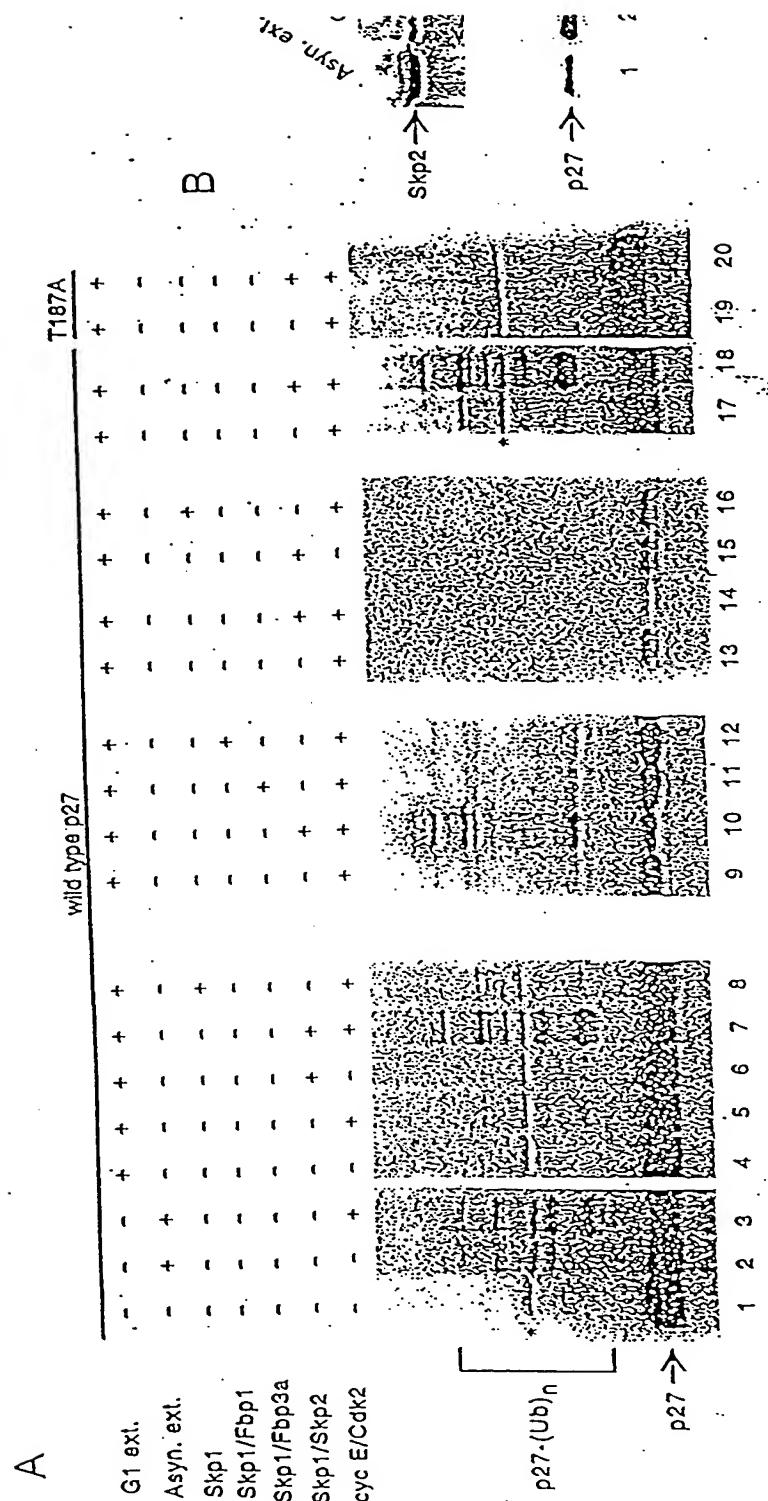


FIG. 39 A-B

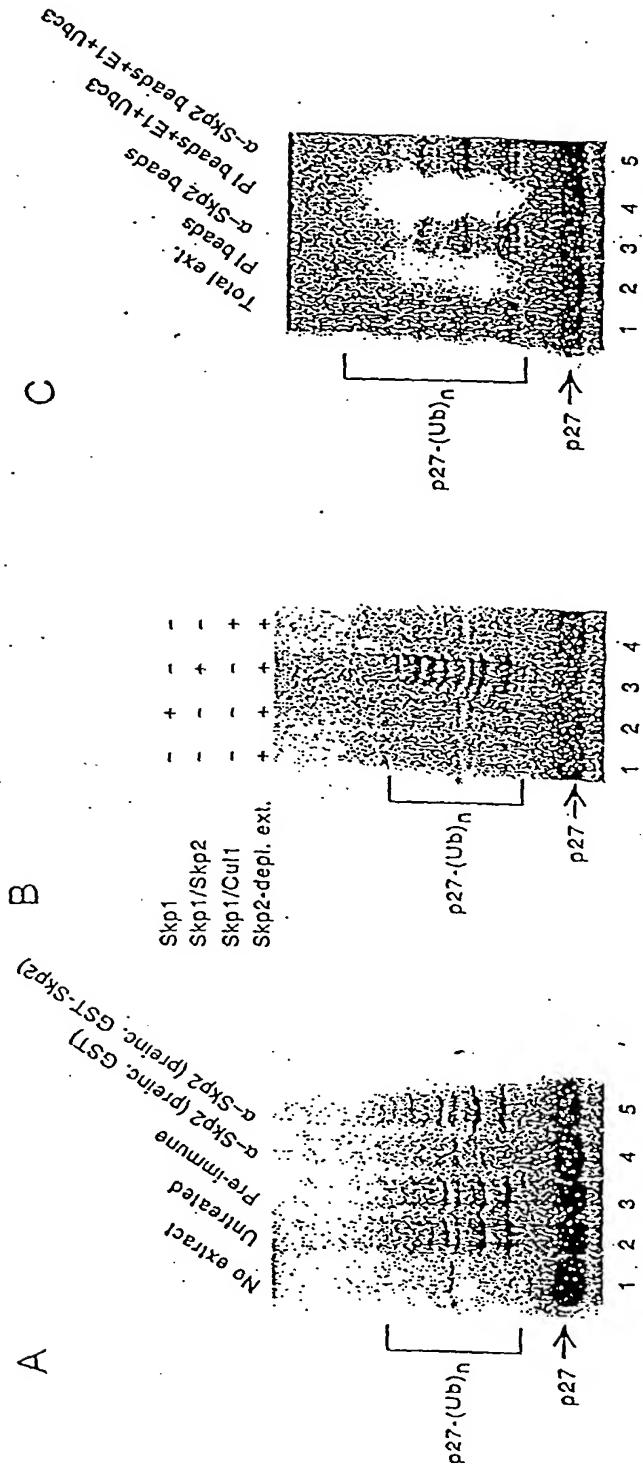
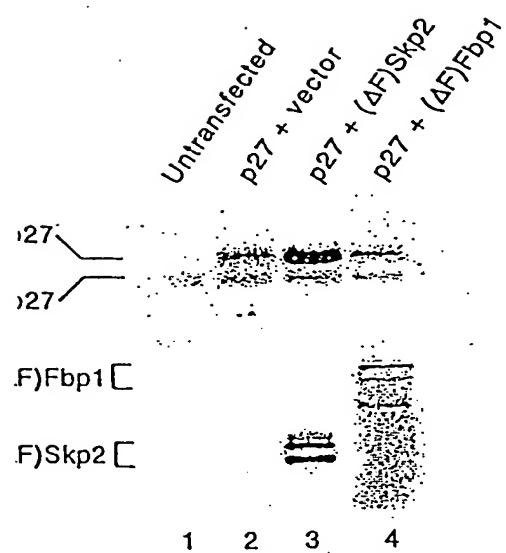


FIG. 40 A-C



B

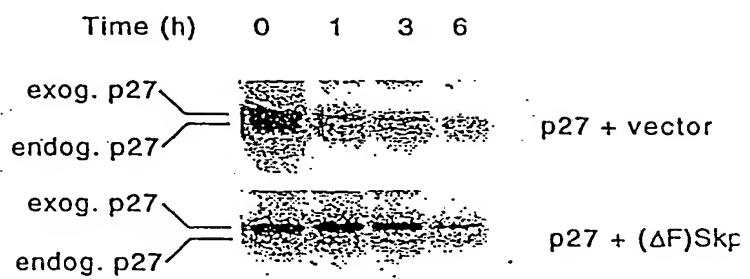


FIG. 41 A-B

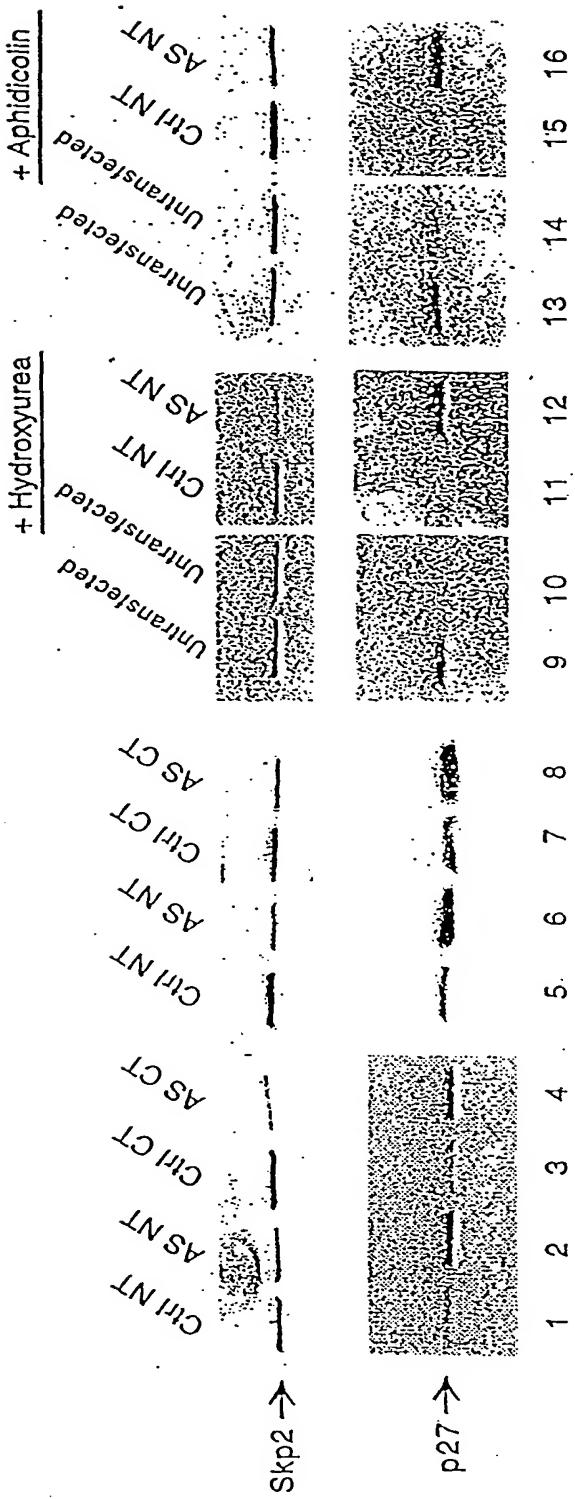


FIG. 42

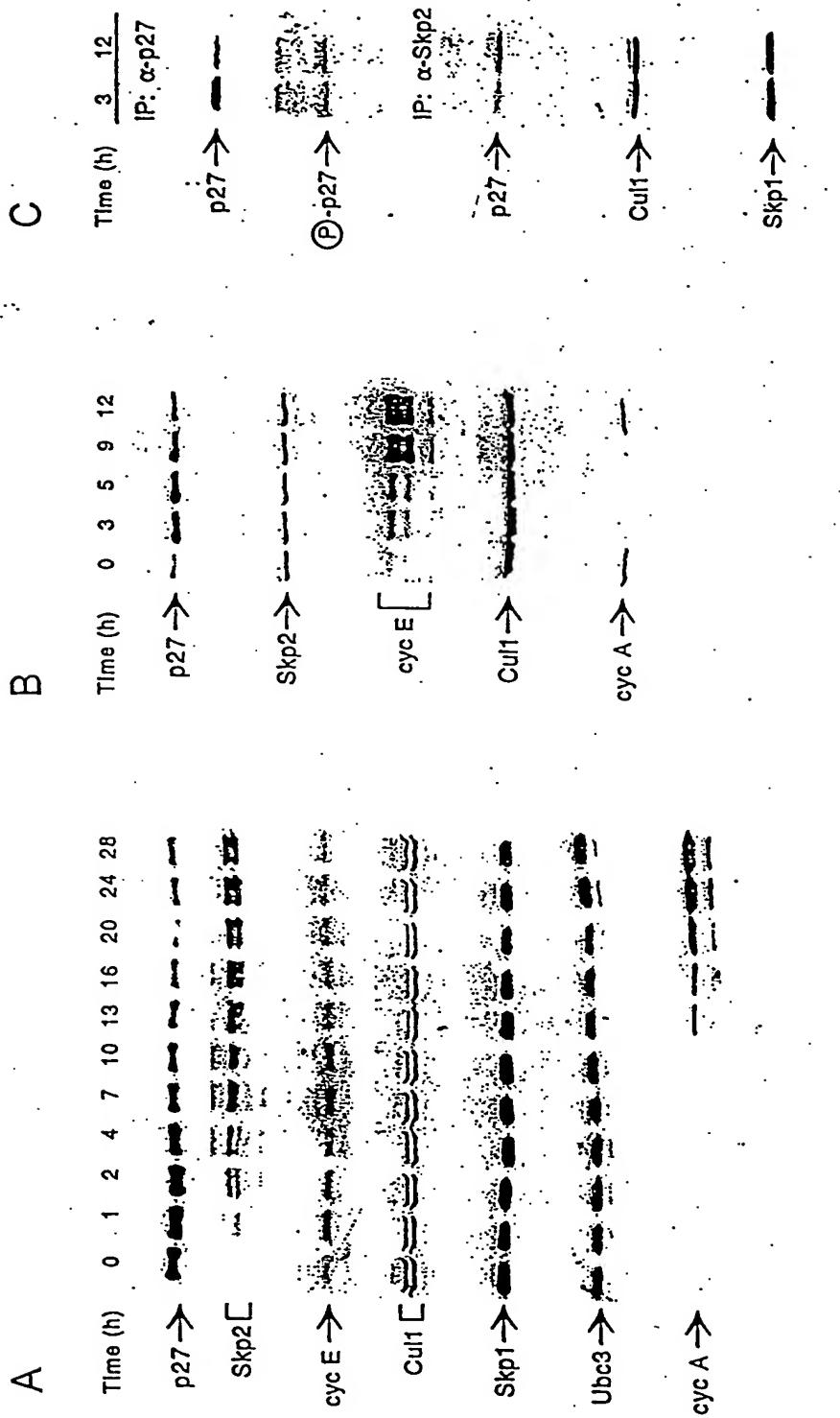


FIG. 43 A-C

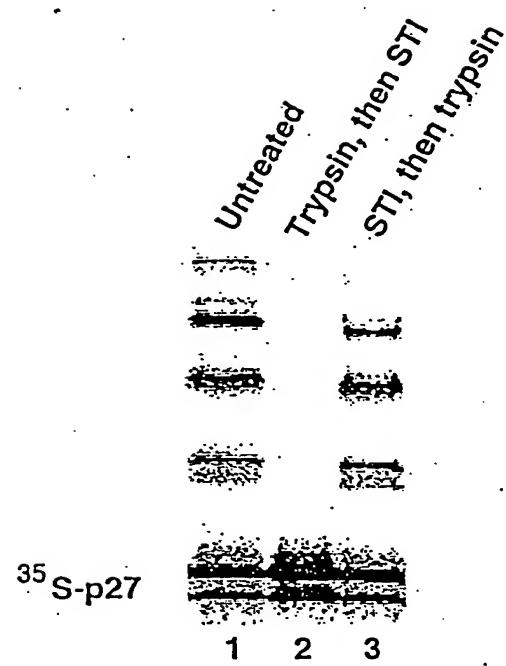
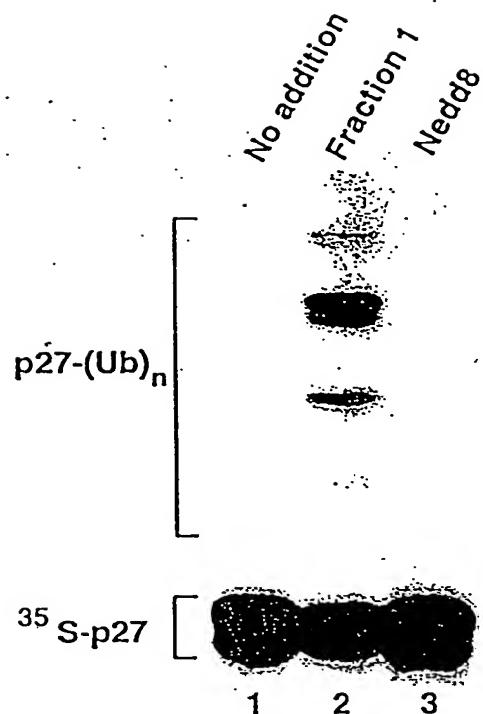
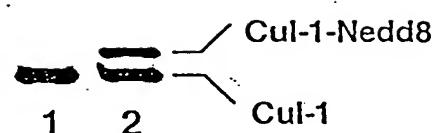
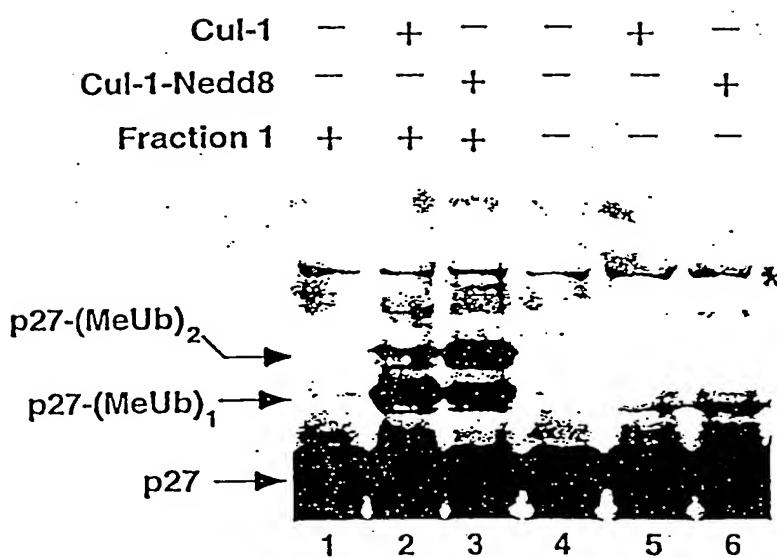
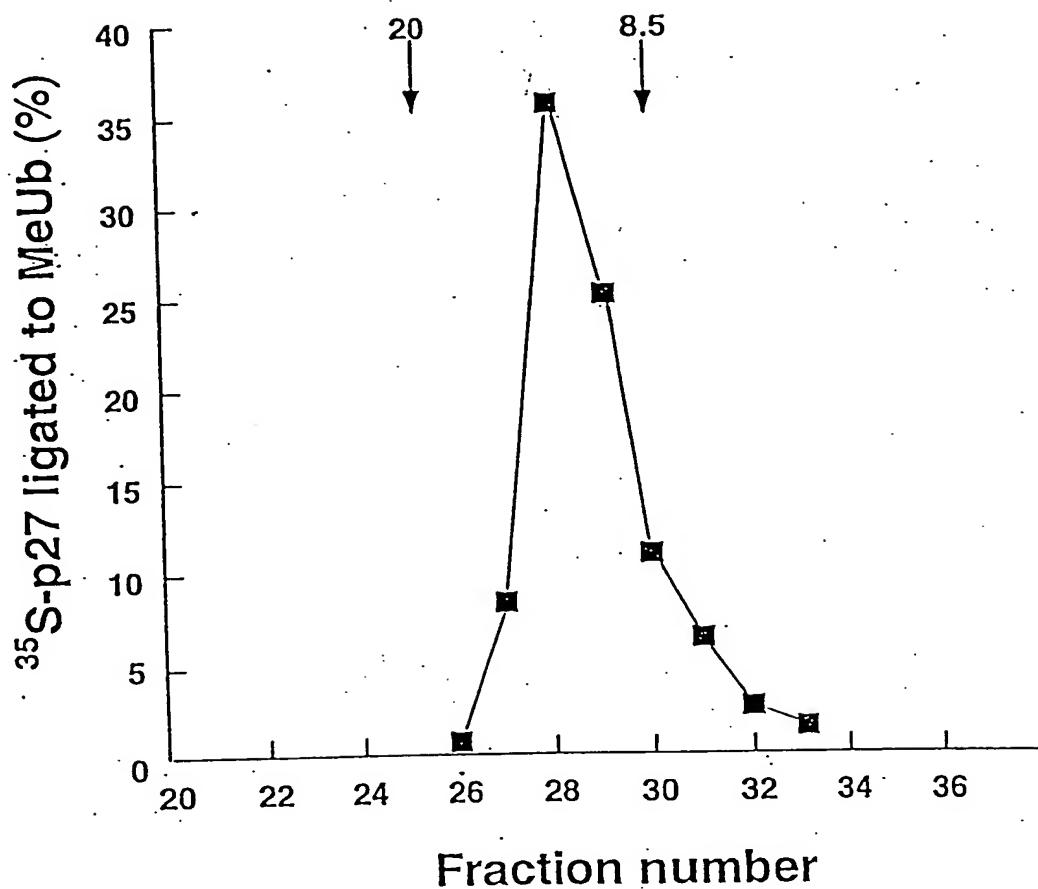


FIG. 44

A**B****C****FIG. 45**

A.



B.

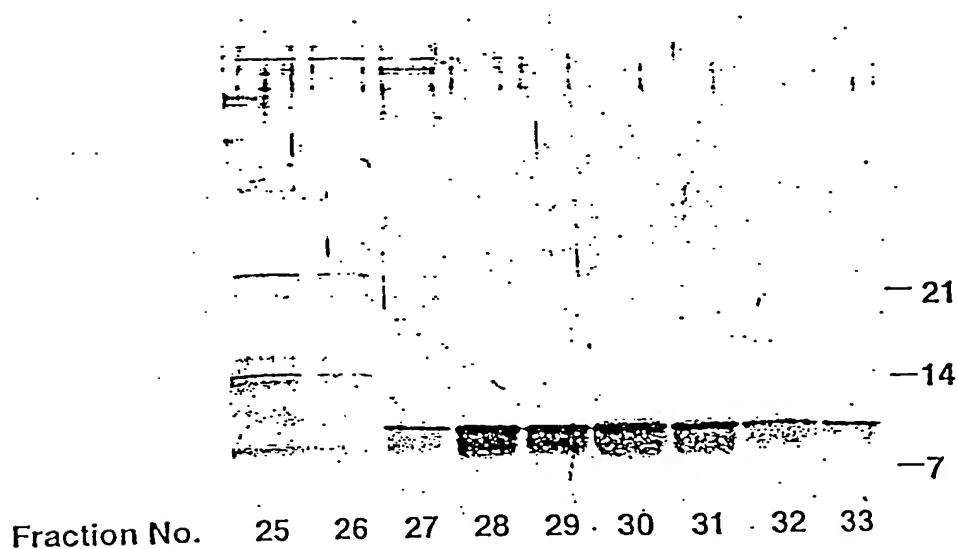


FIG. 46

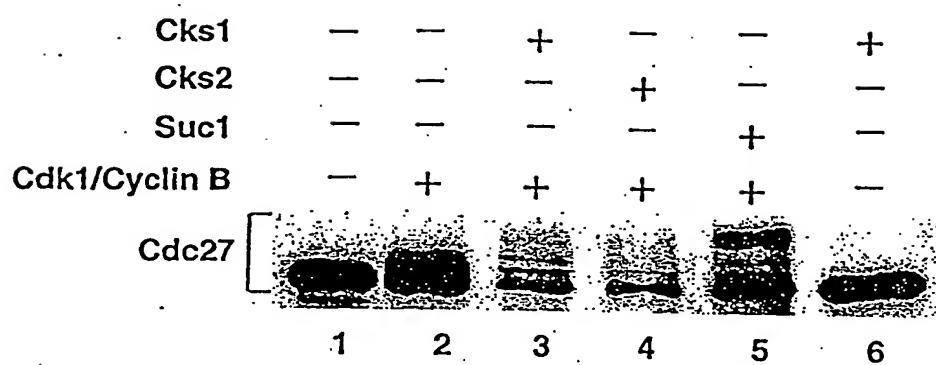
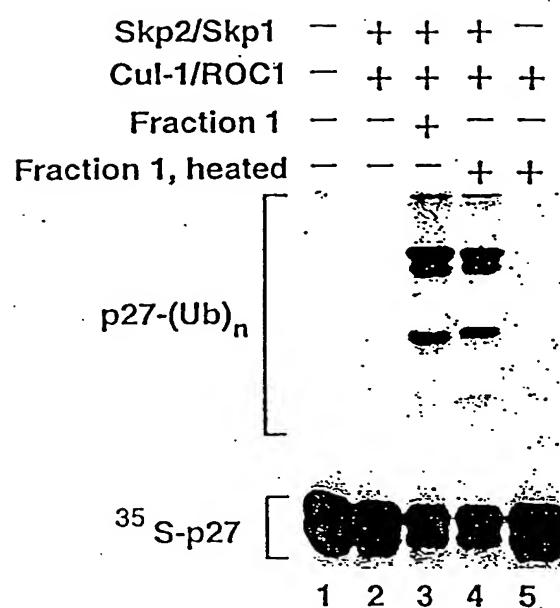


FIG. 47

A**FIG. 48**

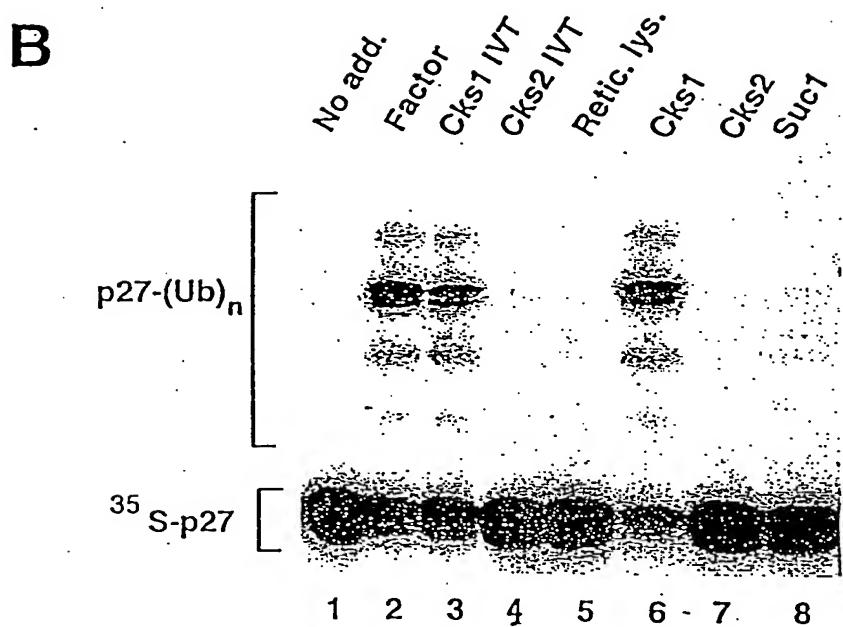


FIG. 48

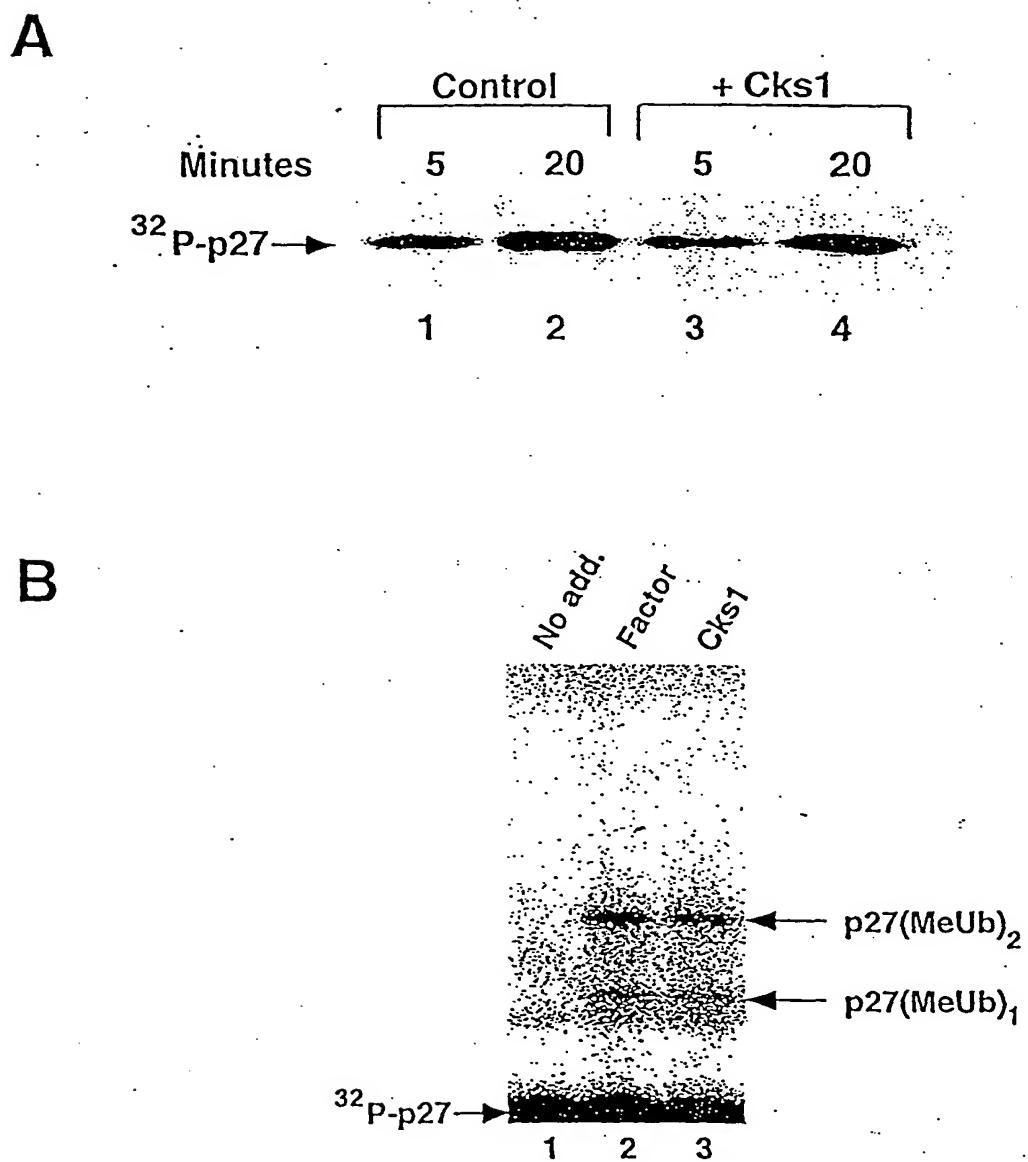
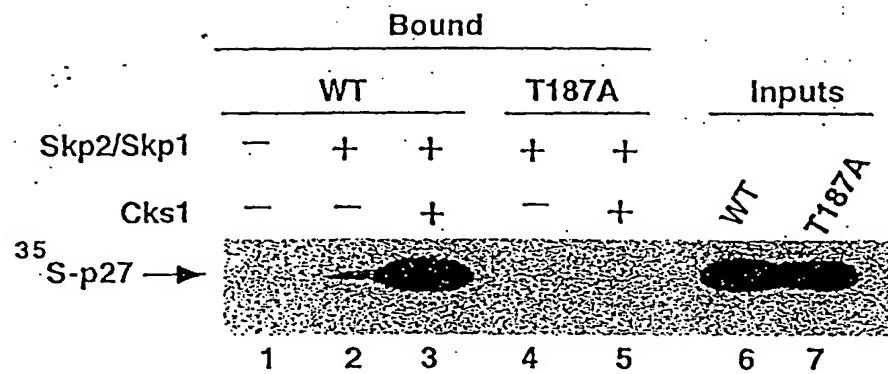
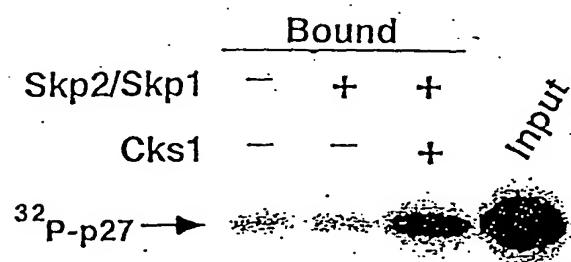
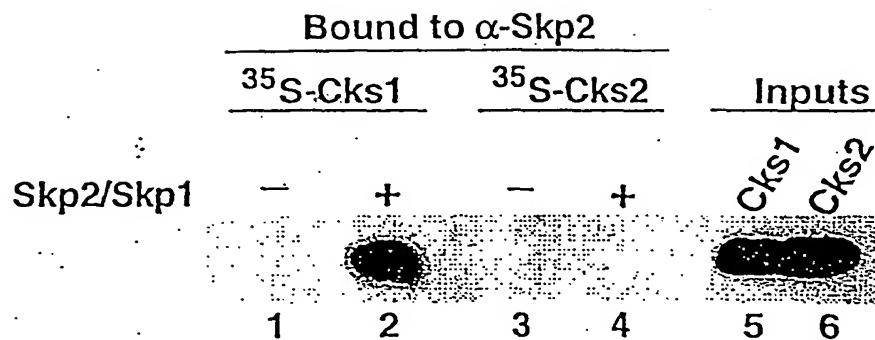
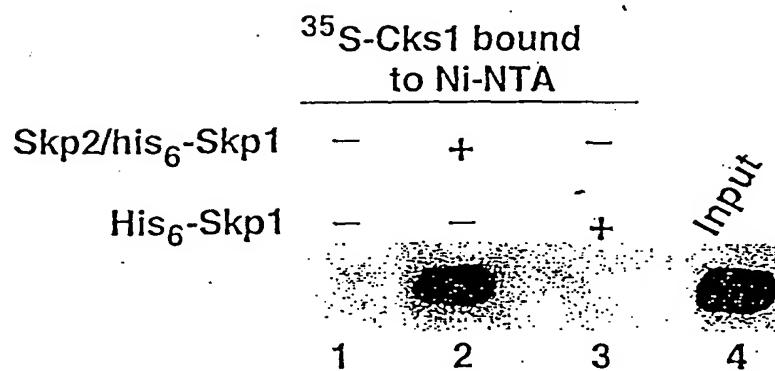
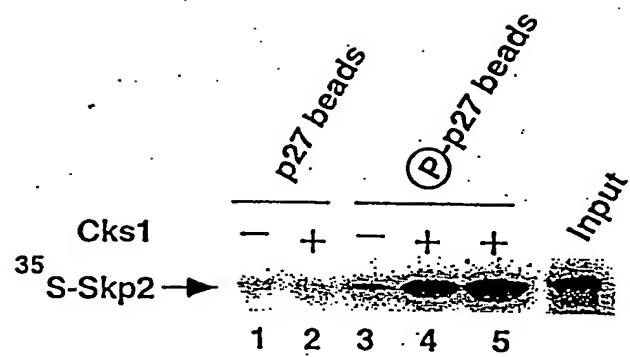
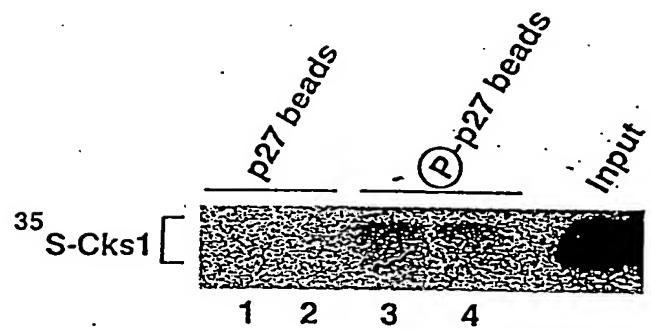


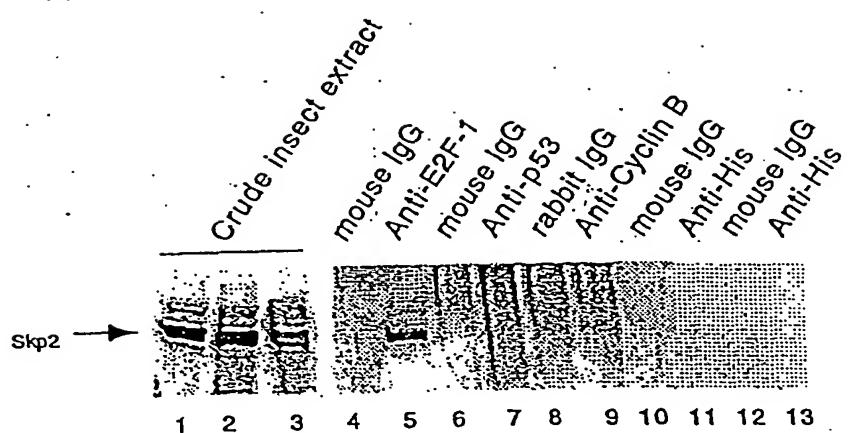
FIG. 49

C**D****FIG. 49**

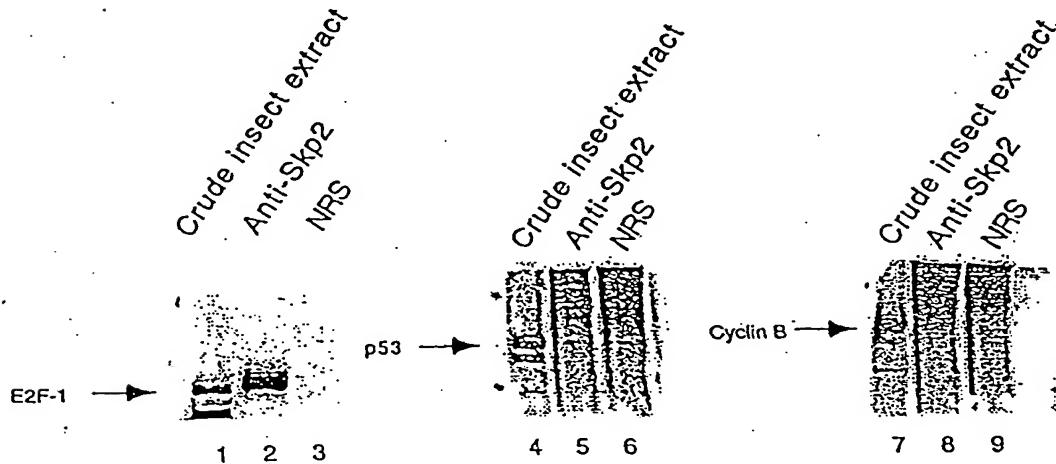
A**B****FIG. 50**

C**D****FIG. 50**

A



B



C

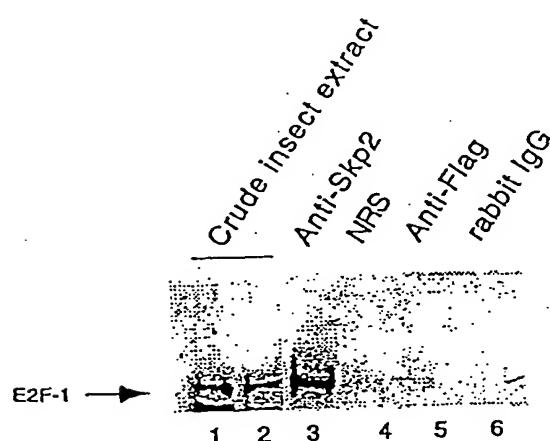


FIG. 51 A-C

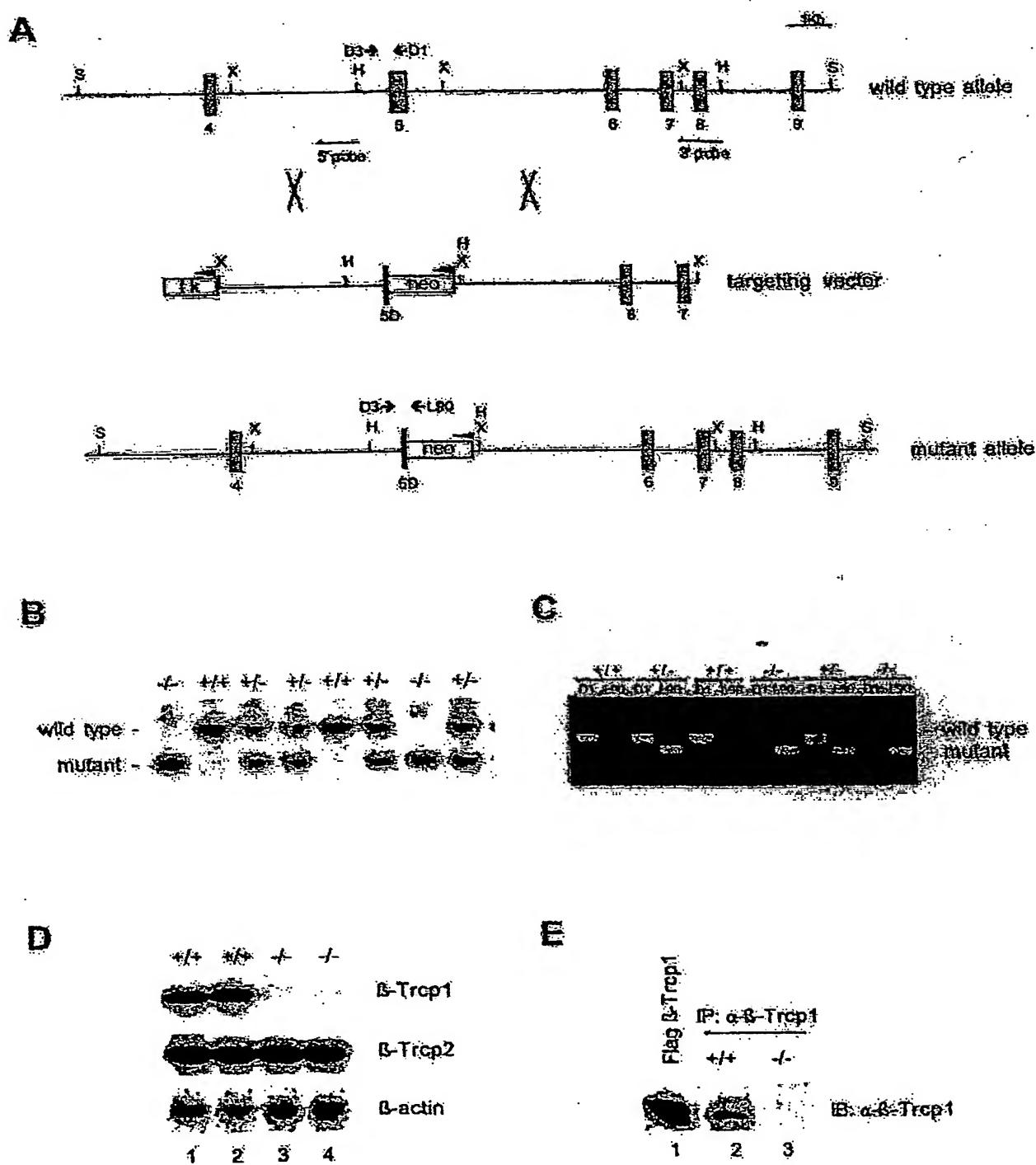


FIG. 52

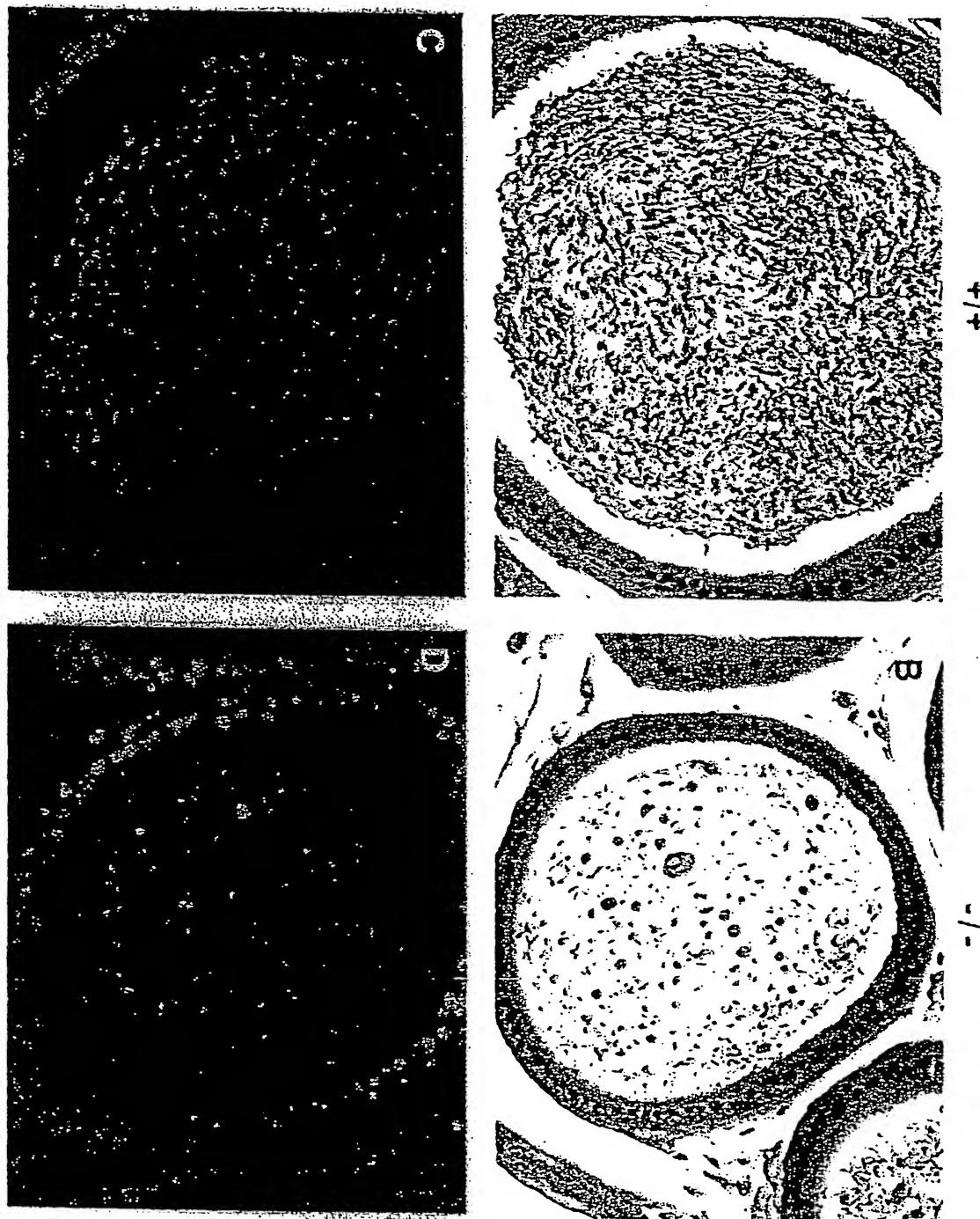


FIG. 53

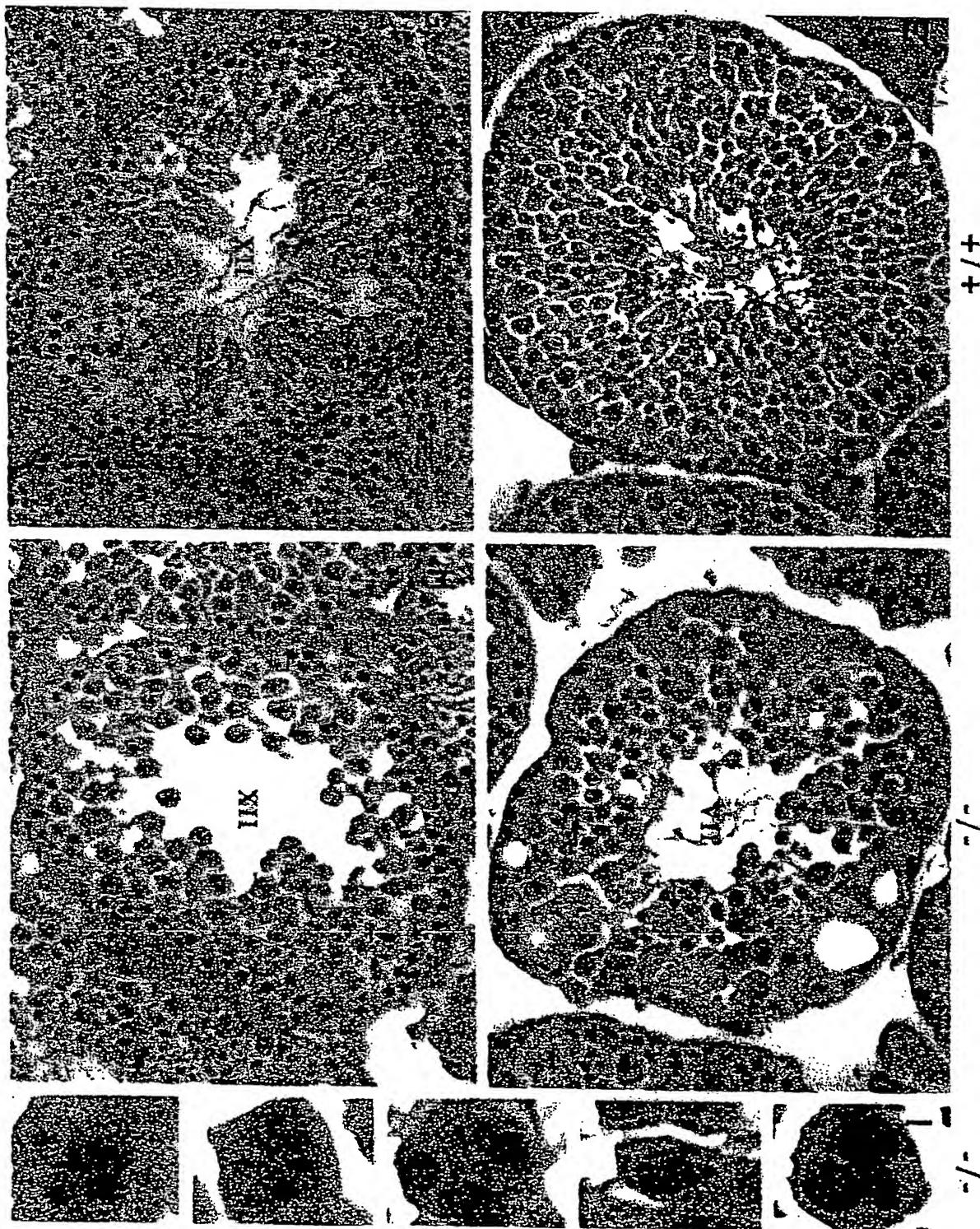
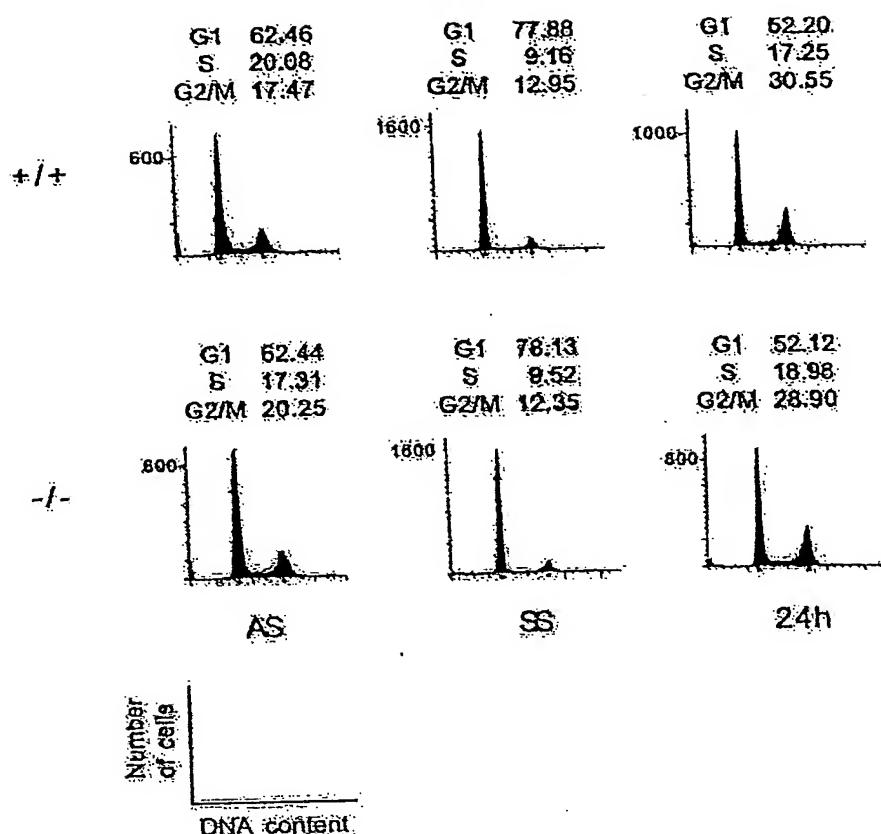
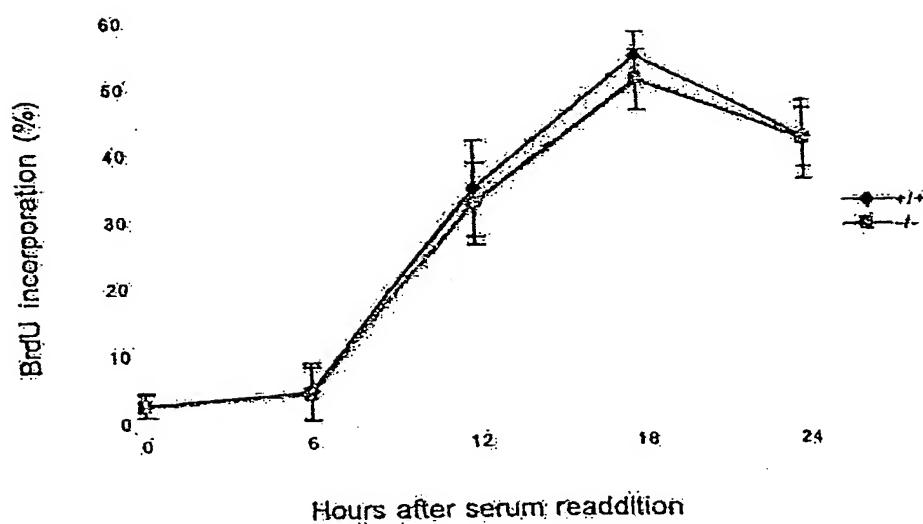
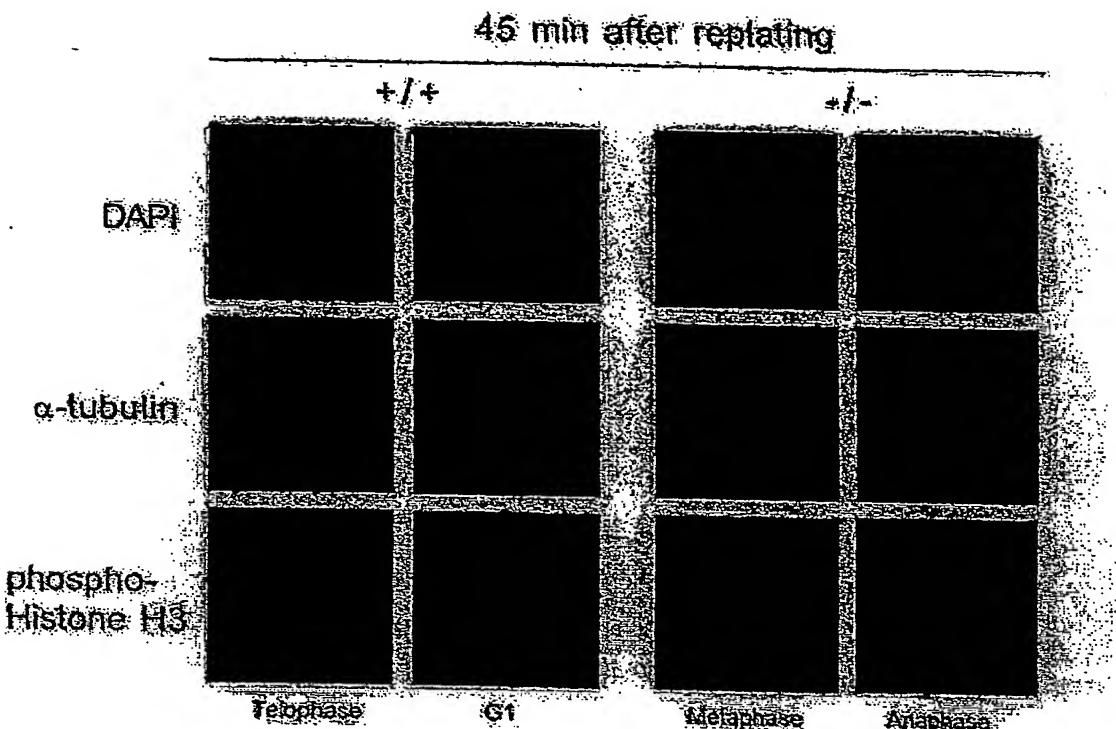


FIG. 53

A**B****FIG. 54**

C



D

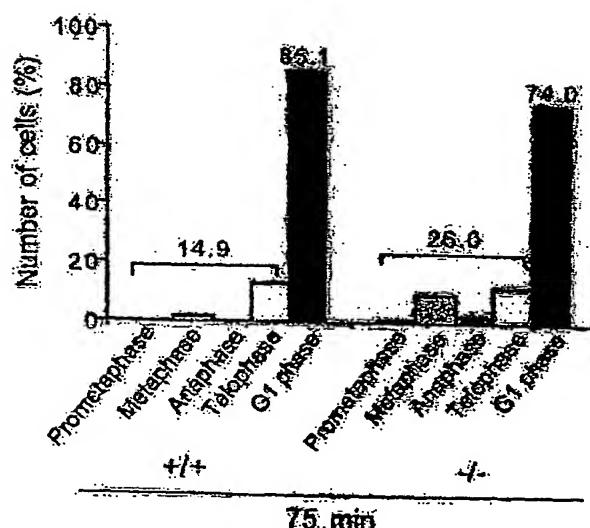
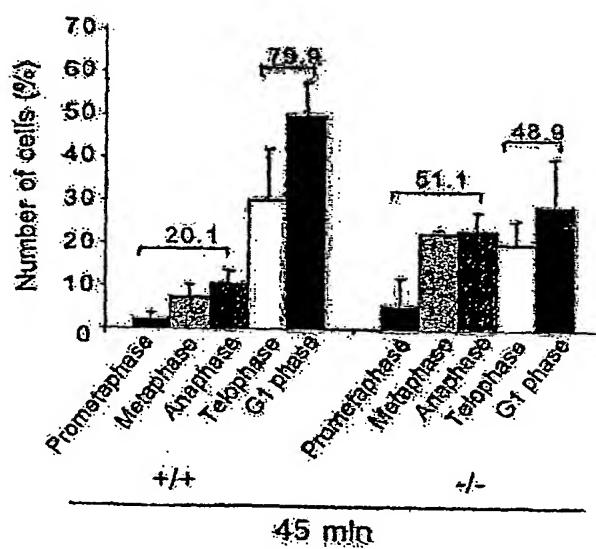
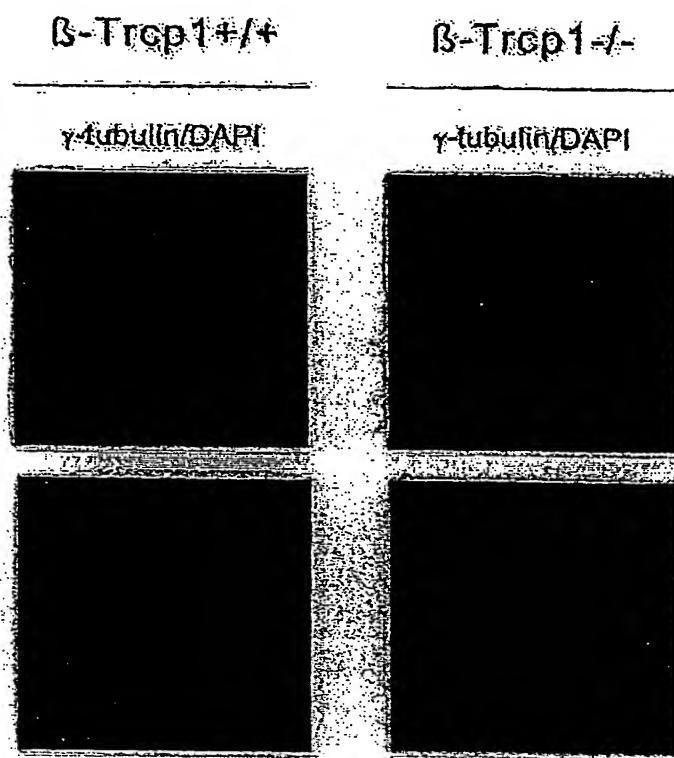


FIG. 54

E



F

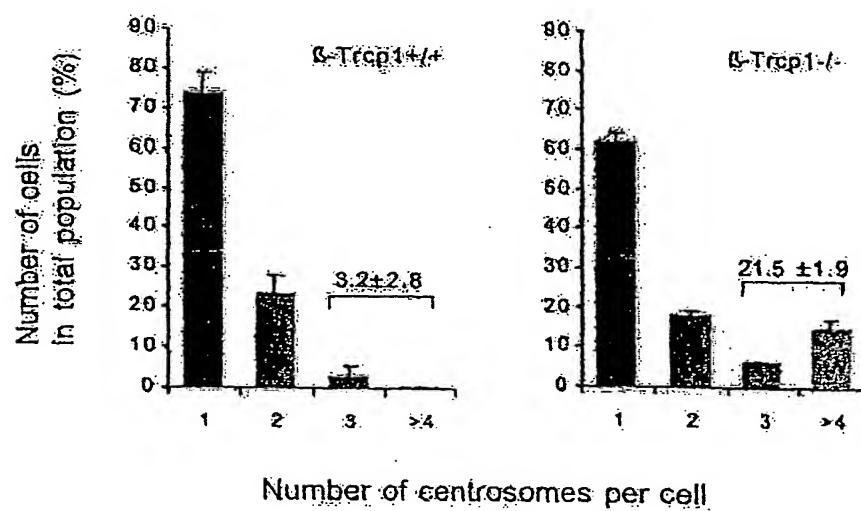
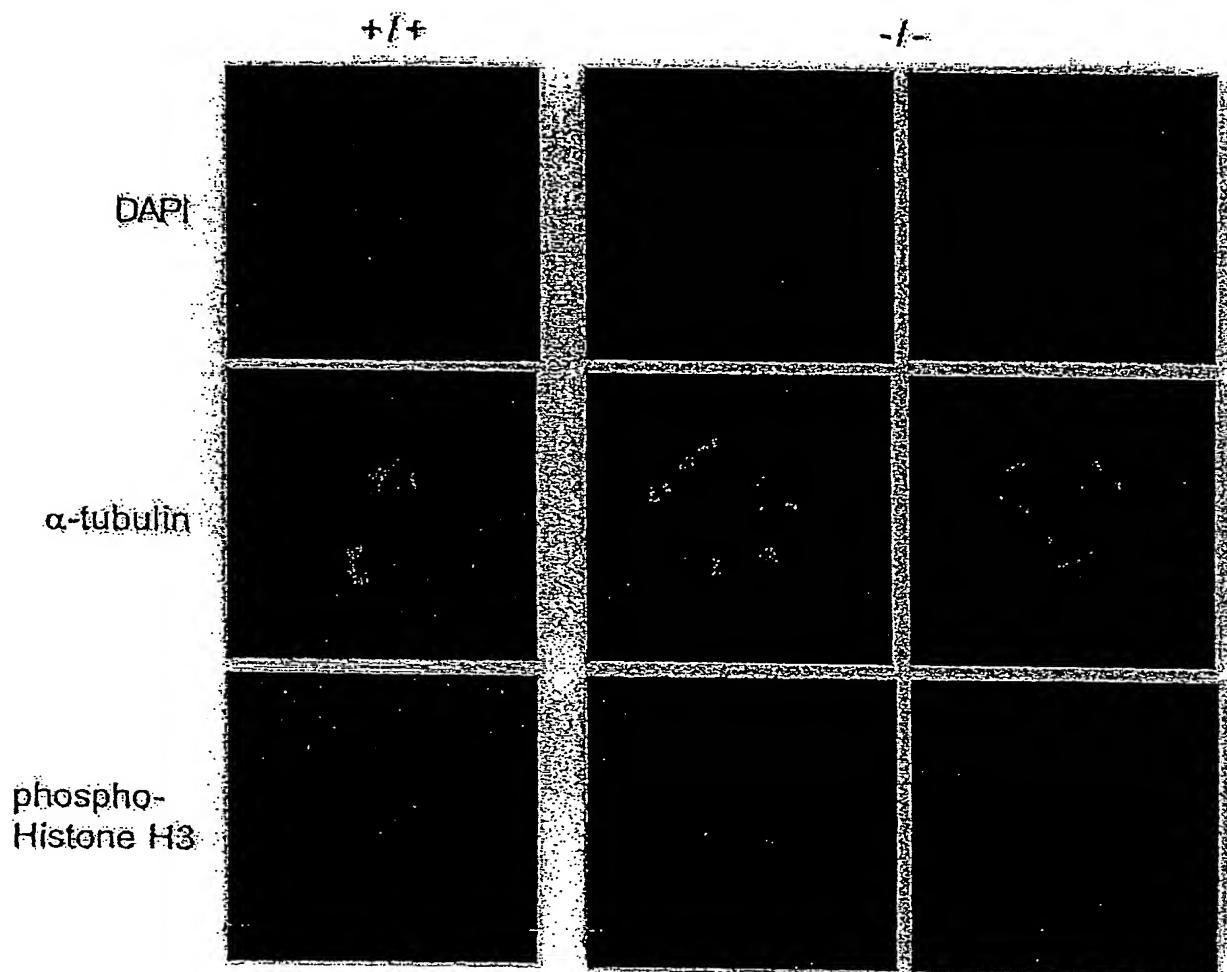
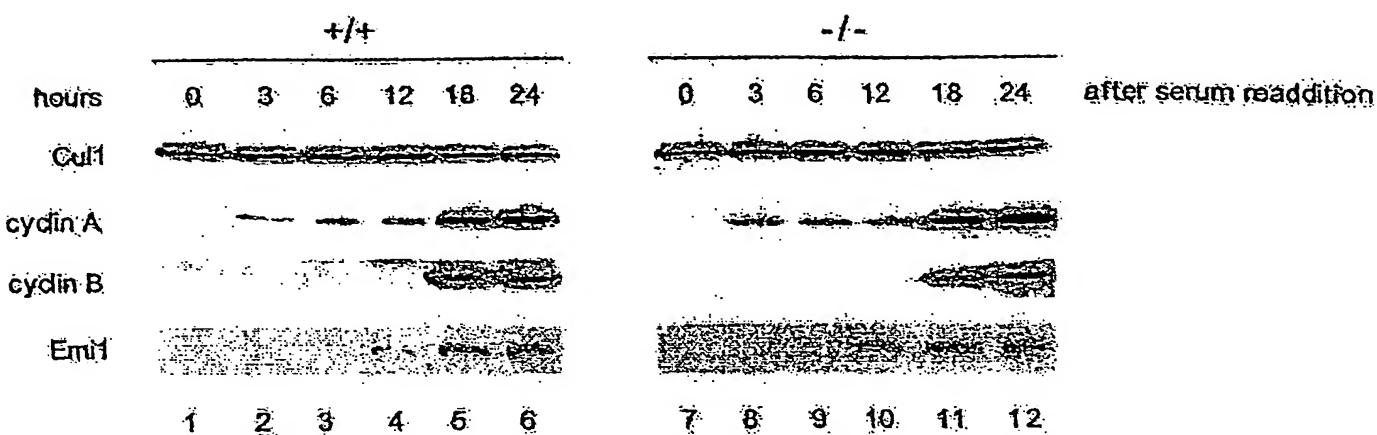
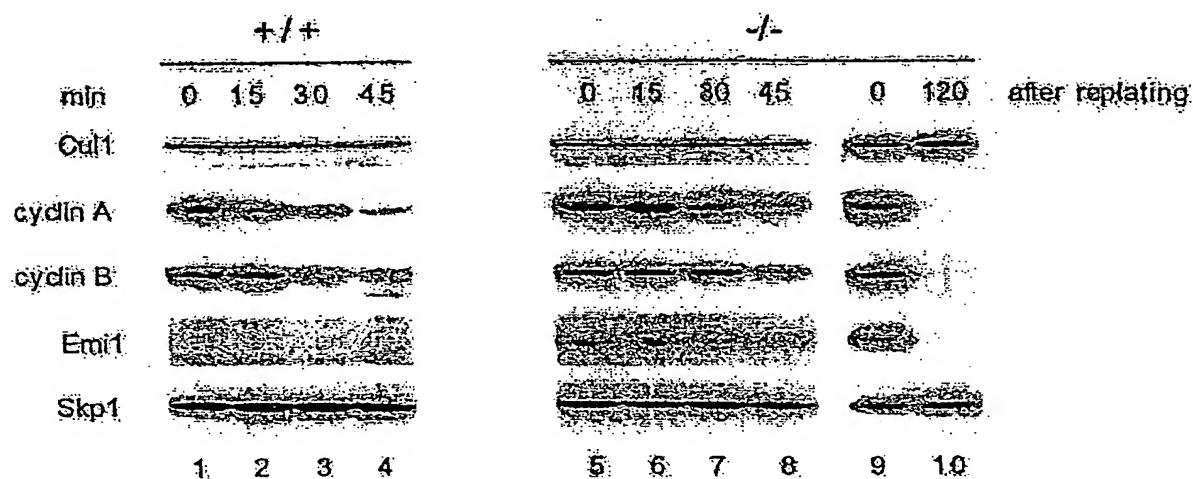
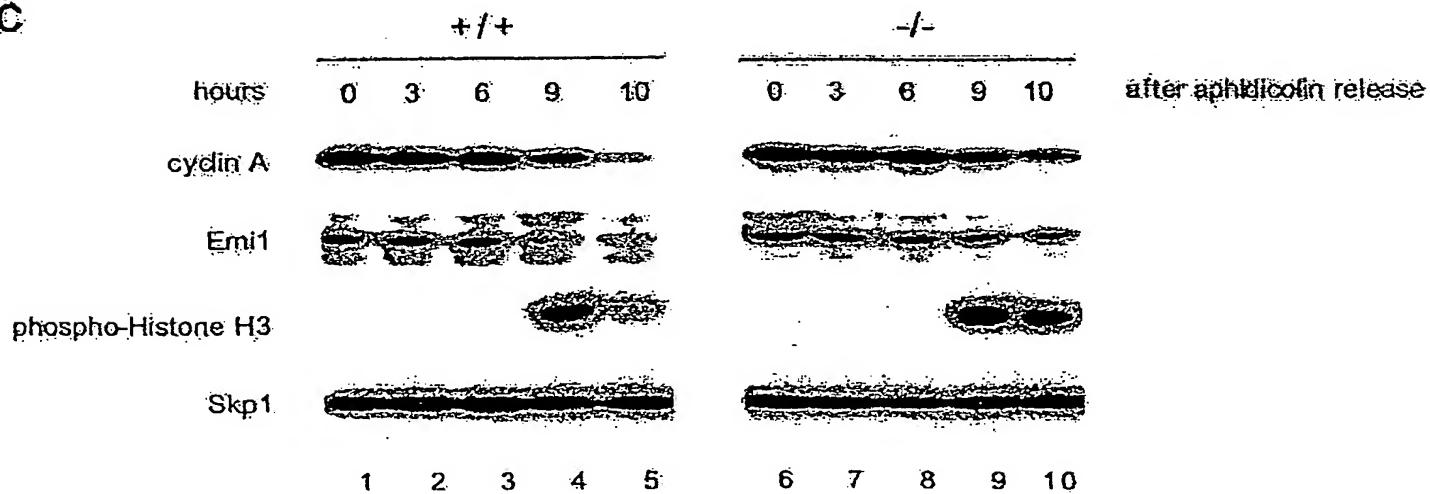
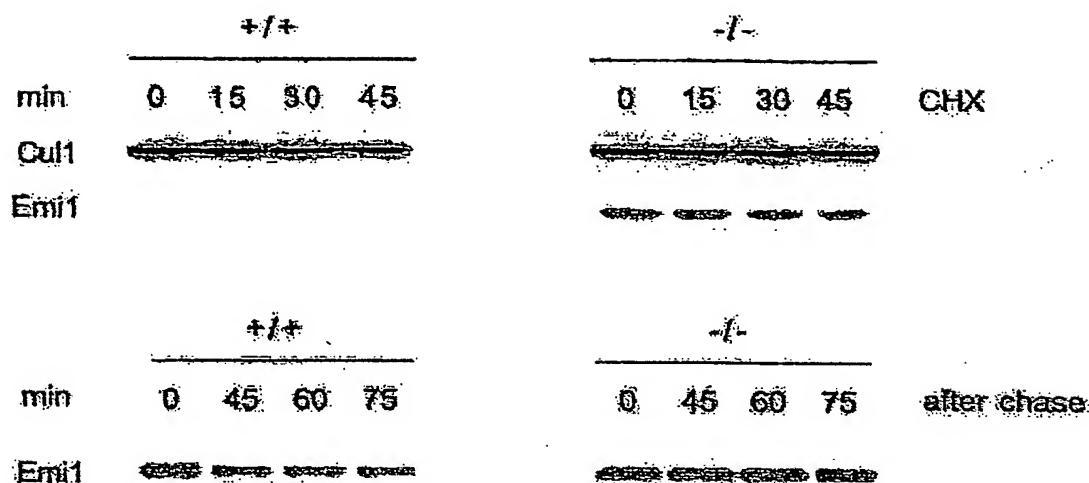


FIG. 54

G**FIG. 54**

A**B****C****FIG. 55**

B



III

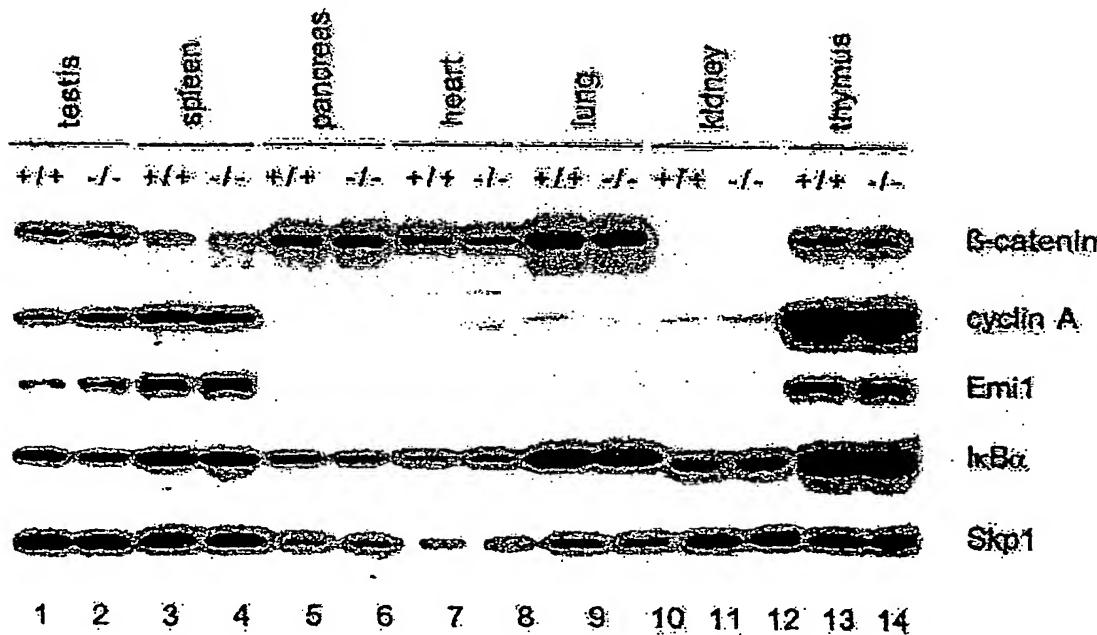
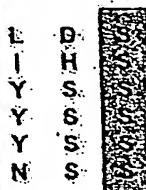
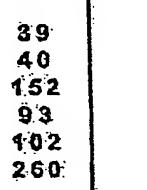
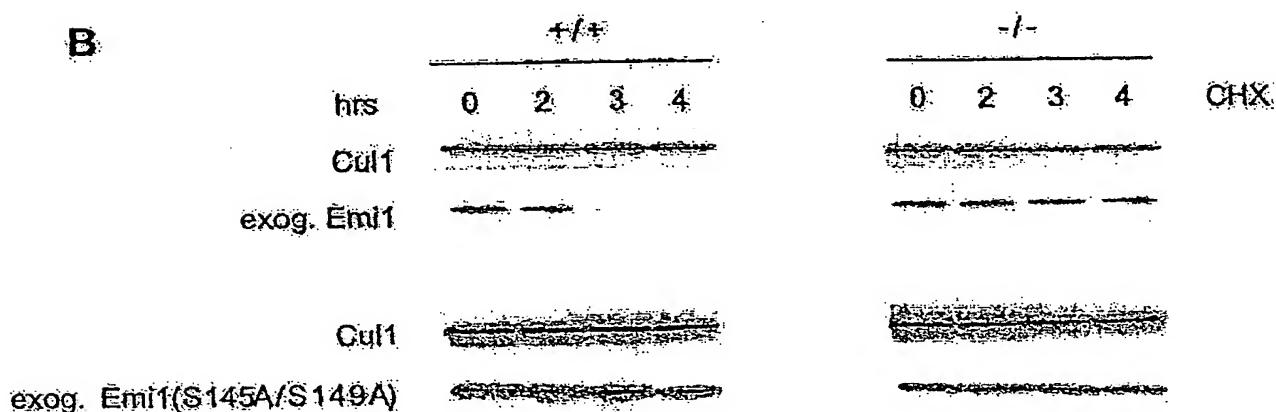
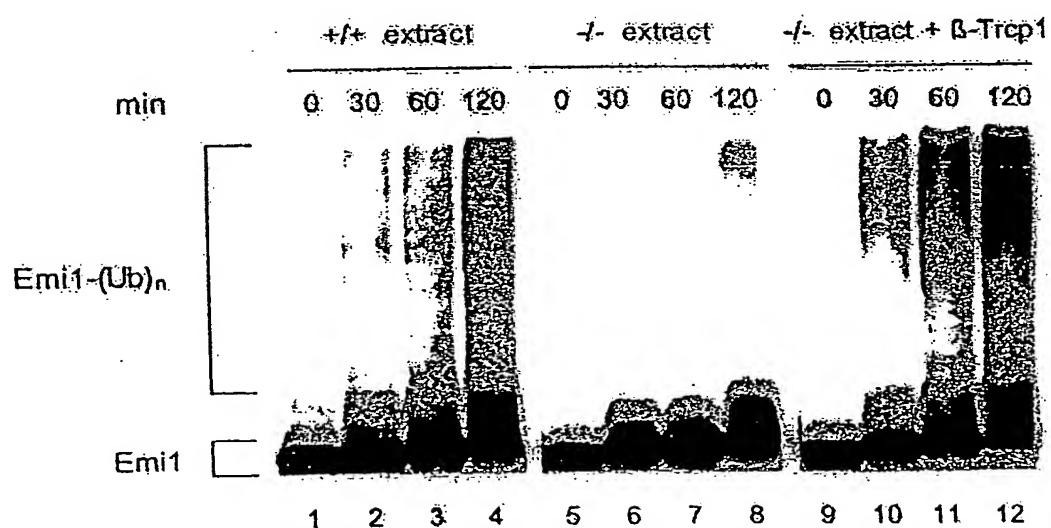
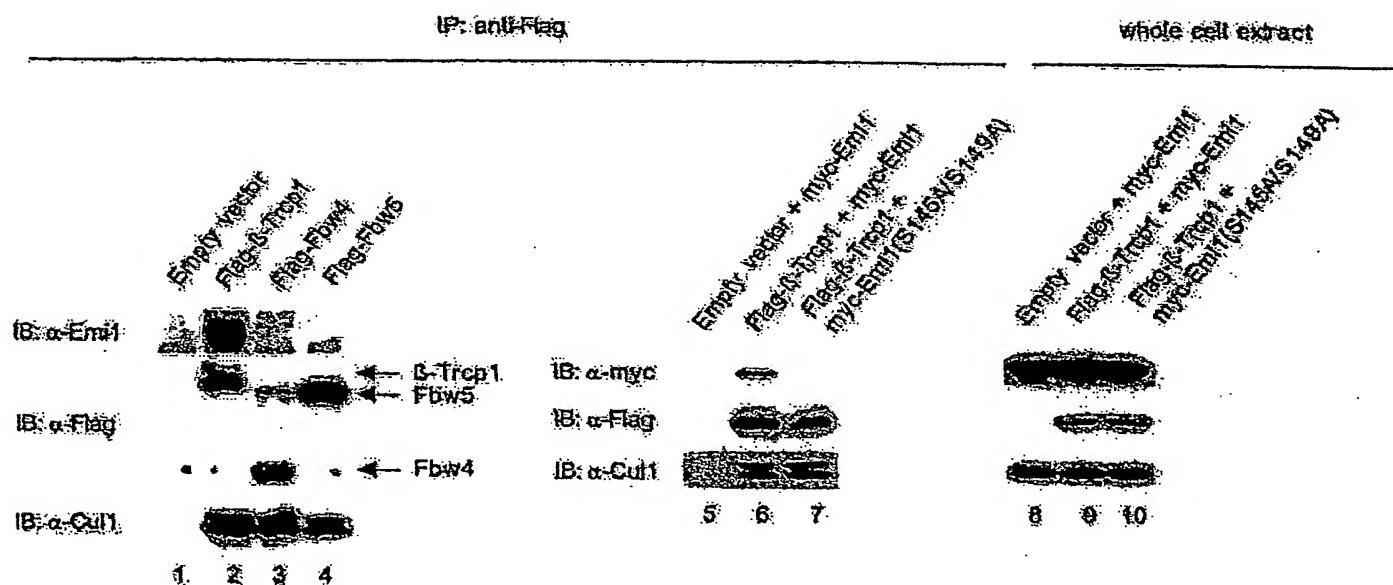


FIG. 55

A

IκBα (Hs)	28	D	R	H		I	D	M	K	D	39
β-catenin (Hs)	29	S	Y	L		S	H	F	A	T	40
Emi1 (Hs)	141	L	Y	E		Y	S	T	S	L	152
Emi1 (Mm)	62	L	Y	E		Y	S	T	Q	Q	93
Emi1 (X)	91	A	L	Q		Y	S	L	N	N	102
Emi1 (Dm)	249	S	L	M		N	S	I	H	L	260

B**C****FIG. 56**

D**FIG. 56**

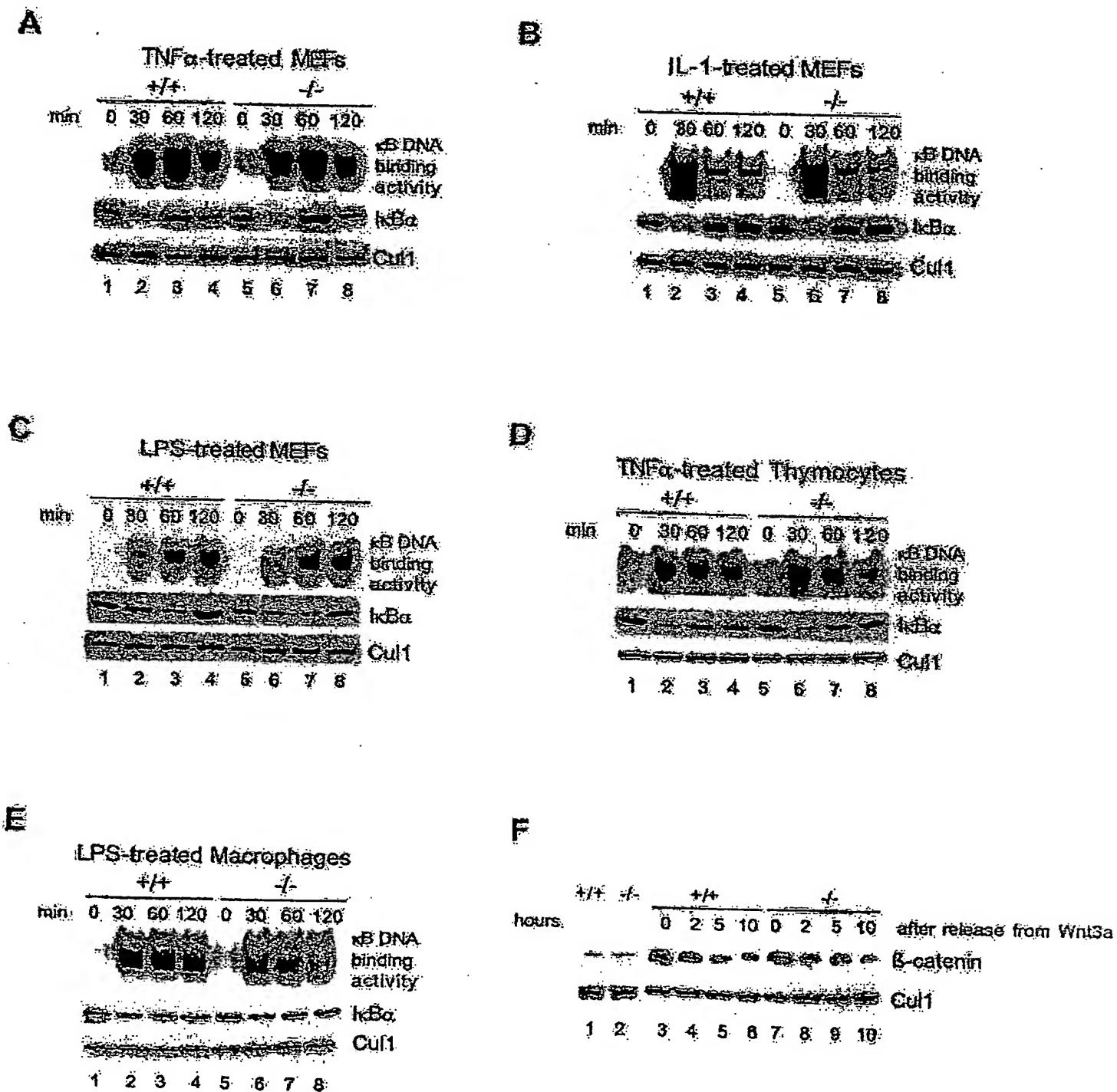


FIG. 57

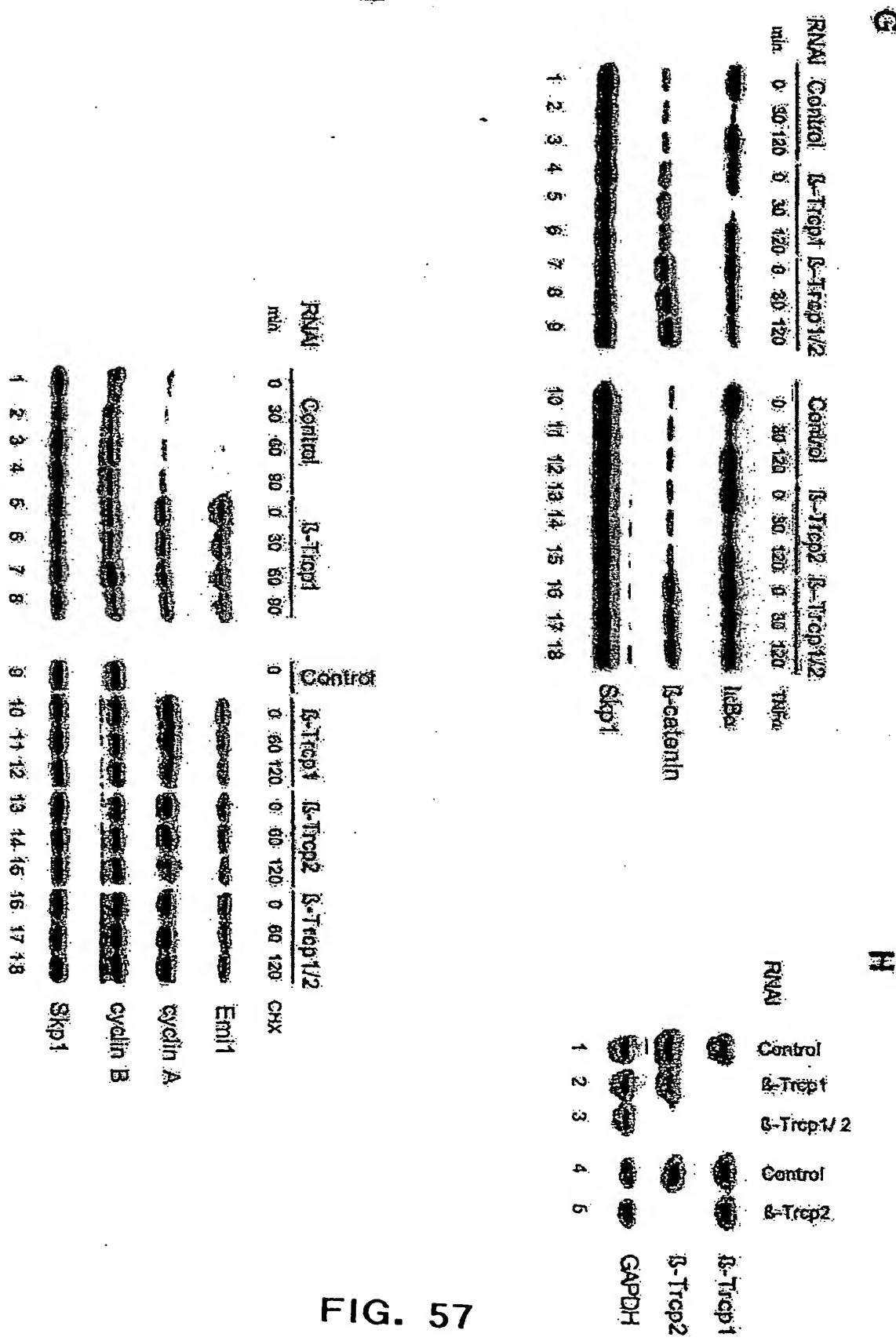


FIG. 57